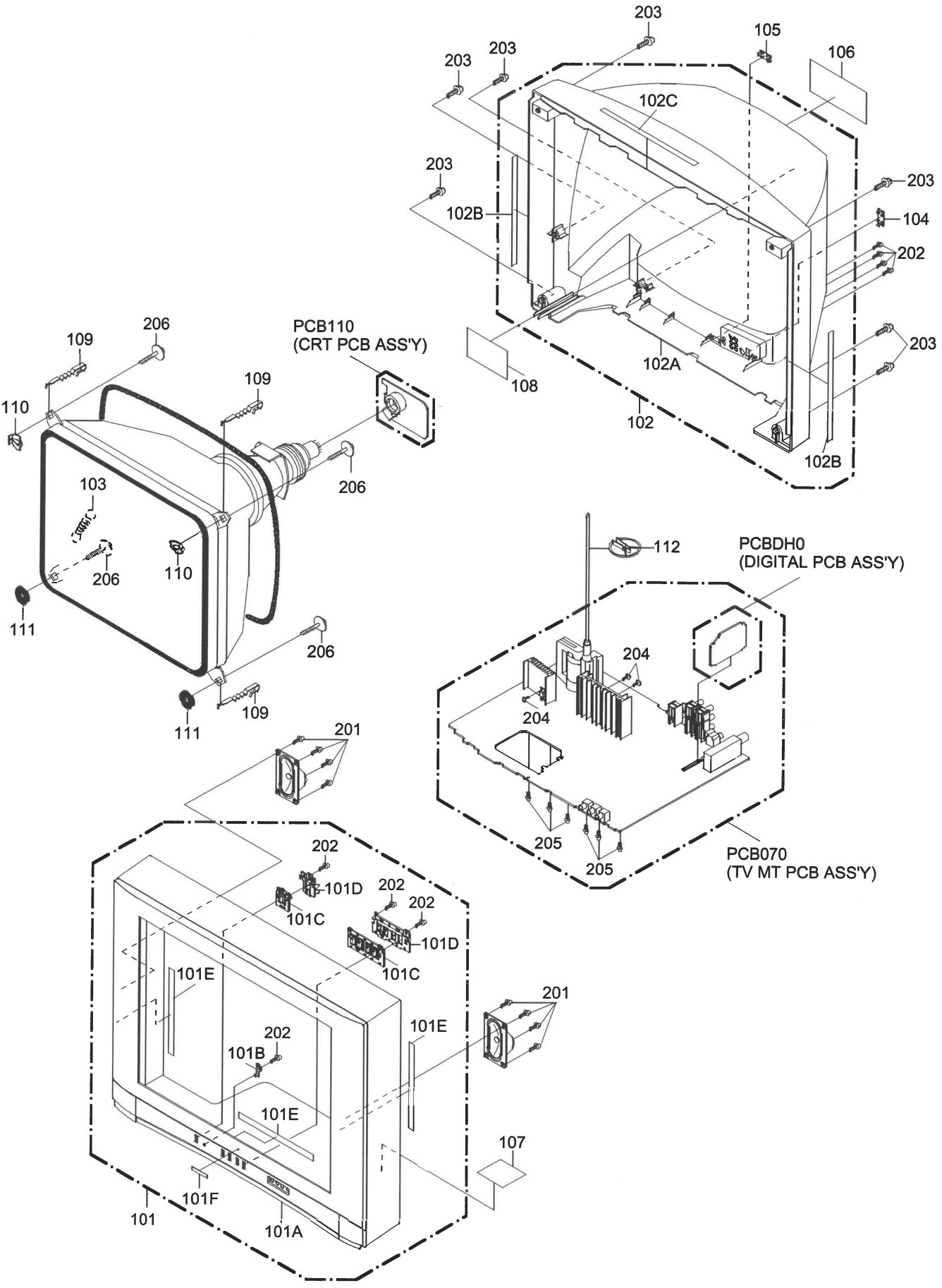
MECHANICAL EXPLODED VIEW



SERVICE MODE LIST

This unit is provided with the following SERVICE MODES so you can repair, examine and adjust easily.
To enter the Service Mode, press both set key and remote control key for more than 2 seconds.

Set Key	Remote Key	Operations
VOL. (-) MIN	0	Releasing of V-CHIP PASSWORD.
VOL. (-) MIN	6	Check for the firmware version. Can be checked of the INITIAL DATA of MEMORY IC. Refer to the "WHEN REPLACING EEPROM (MEMORY) IC".
VOL. (-) MIN	9	Display of the Adjustment MENU on the screen. Refer to the "ELECTRICAL ADJUSTMENT" (On-Screen Display Adjustment).

ELECTRICAL ADJUSTMENTS

1. ADJUSTMENT PROCEDURE

Read and perform these adjustments when repairing the circuits or replacing electrical parts or PCB assemblies.

CAUTION

- Use an isolation transformer when performing any service on this chassis.
- Before removing the anode cap, discharge electricity because it contains high voltage.
- When removing a PCB or related component, after unfastening or changing a wire, be sure to put the wire back in its original position.
- When you replace an IC or Transistor with a heat sink, apply silicon grease on the contact section of the heat sink. Before applying new silicon grease, remove all the old silicon grease. (Old grease may cause damages to the IC and Transistor.)

Prepare the following measurement tools for electrical adjustments.

1. Oscilloscope
2. Digital Voltmeter
3. Multi-sound Generator
4. Pattern Generator
5. AFC Oscillator

On-Screen Display Adjustment

1. In the condition of ***NO*** indication on the screen, press the VOL. DOWN button on the set and the Channel button **(9)** on the remote control for more than 2 seconds to appear the adjustment mode on the screen as shown in **Fig. 1-1** .

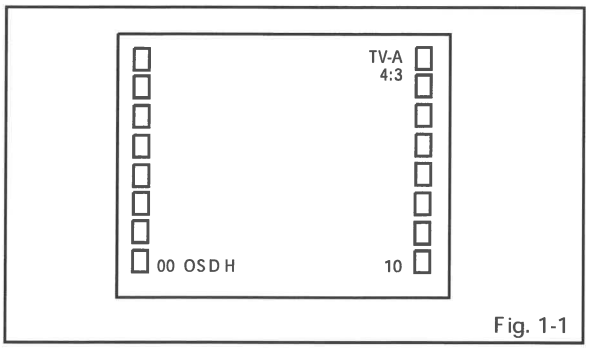


Fig. 1-1

2. Use the Channel UP/DOWN button or Channel button **(0-9)** on the remote control to select the options shown in **Fig. 1-2** .
3. Press the MENU button on the remote control to end the adjustments.
4. To display the adjustment screen for TV-A, TV-D, AV and YUV mode, press the TV/AV button on the remote control. Press the VOL.DOWN button on the set and the channel **(9)** on the remote control for more than 2 seconds.

NO.	FUNCTION	NO.	FUNCTION
00	OSD H	32	CONT.CENT
01	OSD C	33	CONT.MAX
02	CUT OFF	34	CONT.MIN
03	H.POSI	35	COL.CENT
04	H BLK L	36	COL.MAX
05	H BLK R	37	COL.MIN
06	V. SIZE	38	TINT CENT
07	V. POSI	39	SHARP.CENT
08	V. LIN	40	SHARP.MAX
09	VS CORR	41	SHARP.MIN
10	V COMP	42	SUB BIAS
11	R.BIAS	43	H.SIZE
12	G.BIAS	44	PARABOLA
13	B.BIAS	45	TRAPEZIUM
14	R.DRV	46	COR TOP
15	G.DRV	47	COR BTM
16	B.DRV	48	TEST STEREO
29	BRI.CENT		
30	BRI.MAX		
31	BRI.MIN		

Fig. 1-2

2. BASIC ADJUSTMENTS

2-1: CONSTANT VOLTAGE

1. Place the set in AV MODE without signal.
2. Connect the digital voltmeter to the **TP003** .
3. Adjust the **VR502** until the digital voltmeter is 130 ± 0.5V.

2-2: AFT

1. Place the set in an Aging Test for more than 15 minutes
2. Connect the AFC Oscillator 45.75MHz to the **TP002** .
3. Connect the digital voltmeter to the **TP001** .
4. Adjust the **L205** until the digital voltmeter is 2.3 ± 0.1V.

2-3: CUT OFF

1. Place the set in an Aging Test for more than 15 minutes
2. Place the set in AV MODE without signal.
3. Using the remote control, set the brightness and contrast to normal position.
4. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(02)** on the remote control to select "CUT OFF".
5. Adjust the **Screen Volume** until a dim raster is obtained.

2-4: FOCUS

1. Provide a the monoscope pattern with a pattern generator.
2. Turn the Focus Volume fully counterclockwise once.
3. Adjust the **Focus Volume** until picture is distinct.

2-5: WHITE BALANCE

NOTE: Adjust after performing CUT OFF adjustment.

1. Place the set in Aging Test for more than 15 minutes.
2. Provide the white 100% signal from the Pattern Generator.
3. Using the adjustment control, set the brightness and contrast to normal position.
4. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(11)** on the remote control to select "R.BIAS".
5. Using the VOL. UP/DOWN button on the remote control, adjust the R.BIAS.
6. Press the CH. UP/DOWN button on the remote control to select the "R.DRV", "B.DRV", "G.BIAS" or "B.BIAS".
7. Using the VOL. UP/DOWN button on the remote control, adjust the R.DRV, B.DRV, G.BIAS or B.BIAS.
8. Perform the above adjustments 6 and 7 until the white color is achieved.

ELECTRICAL ADJUSTMENTS

2-6: TINT

1. Provide a color bar pattern with the generator. (RF Input)
2. Using the remote control, set the brightness, contrast, color and tint to normal position.
3. Connect the oscilloscope to **TP024** .
4. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(38)** on the remote control to select "TINT".
5. Press the VOL. UP/DOWN button on the remote control until the section A1 and A2 becomes as straight line. **(Refer to Fig. 2-1)**
6. Provide a monoscope pattern. (Audio Video Input)
7. Press the TV/AV button on the remote control to set to the AV mode. Then perform the above adjustments 2~5.
8. Provide a monoscope pattern. (YUV)
9. Press the TV/AV button on the remote control to set to the YUV mode.
10. Using the remote control, set the brightness, contrast, color and tint to normal position.
11. Connect the oscilloscope to **TP024** .
12. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(38)** on the remote control to select "TINT".
13. Press the VOL. UP/DOWN button on the remote control until the section A1 and A2 becomes as straight line. **(Refer to Fig. 2-2)**
14. Provide a ATSC monoscope pattern. (Digital)
15. Press the TV/AV button on the remote control to set to the DIGITAL mode.Then perform the above adjustments 2~5.

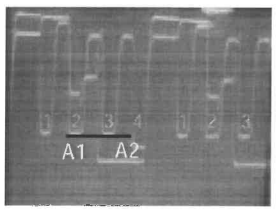


Fig. 2-1

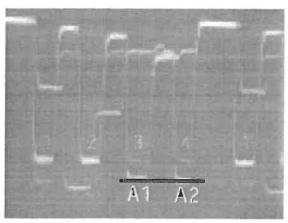


Fig. 2-2

2-7: COLOR CENT

1. Provide a color bar pattern with the generator. (RF Input)
2. Using the remote control, set the brightness, contrast, color and tint to normal position.
3. Connect the oscilloscope to **TP022** .
4. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(35)** on the remote control to select "COL.CENT".
5. Adjust the VOLTS RANGE VARIABLE knob of the oscilloscope until the range between white 100% and 0% is set to 5 scales on the screen of the oscilloscope.
6. Press the VOL. UP/DOWN button on the remote control until the red color level is adjusted to 105 ± 5% of the white level. **(Refer to Fig. 2-3)**
7. Provide a video color bar pattern. (Audio Video Input)
8. Press the button on the remote control to set to the AV mode. Then perform the above adjustments 2~6.
9. Provide a color bar pattern. (YUV)
10. Press the TV/AV button on the remote control to set to the YUV mode.Then perform the above adjustments 2~6.
11. Provide a Digital (ATSC) color bar pattern.
12. Press the TV/AV button on the remote control to set to the DIGITAL mode.
13. Using the remote control, set the brightness, contrast, color and tint to normal position.
14. Connect the oscilloscope to **TP022** .
15. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(35)** on the remote control to select "COL.CENT".
16. Adjust the VOLTS RANGE VARIABLE knob of the oscilloscope until the range between white 100% and 0% is set to 5 scales on the screen of the oscilloscope.
17. Press the VOL. UP/DOWN button on the remote control until the red color level is adjusted to 95 ± 5% of the white level. **(Refer to Fig. 2-4)**

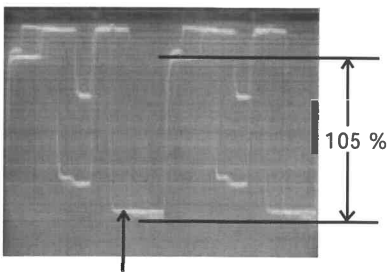


Fig. 2-3

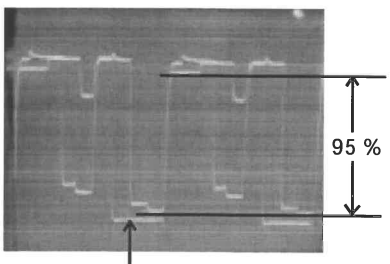


Fig. 2-4

ELECTRICAL ADJUSTMENTS

2-8: OSD POSITION

1. Provide a monoscope pattern from the Pattern Generator.
2. Using the remote control, set the brightness and contrast to normal position.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(00)** on the remote control to select "OSD H".
4. Press the VOL. UP/DOWN button on the remote control until the difference of A and B becomes minimum.
   (Refer to Fig. 2-5)

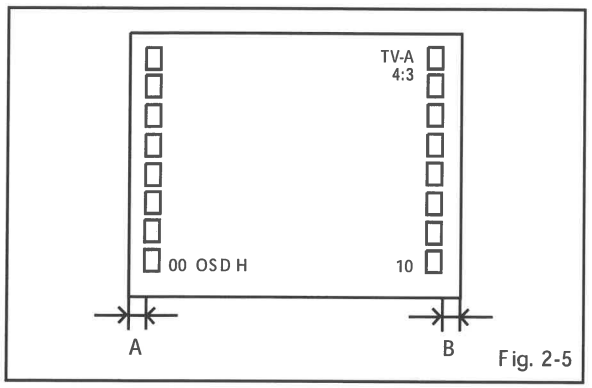


Fig. 2-5

2-9: HORIZONTAL POSITION

1. Provide a Analog monoscope pattern with a generator.
2. Using the remote control, set the brightness and contrast to normal position.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(03)** on the remote control to select "H.POSI".
4. Press the VOL. UP/DOWN button on the remote control until the SHIFT quantity of the OVER SCAN on right and left becomes minimum.
5. Provide a Digital (ATSC) monoscope pattern.
6. Press the TV/AV button on the remote control to set to the DIGITAL mode.Then perform the above adjustments 2~4.

2-10: HORIZONTAL SIZE

1. Provide a monoscope pattern with the pattern generator.
2. Using the remote control, set the brightness and contrast to normal position.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(43)** on the remote control to select "H.SIZE".
4. Press the VOL. UP/DOWN button on the remote control until the SHIFT quantity of the OVER SCAN on the right and left becomes 10± 3%.

2-11: VERTICAL LINEARITY

1. Provide a monoscope pattern with the generator.
2. Using the remote control, set the brightness, contrast, to normal position.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(08)** on the remote control to select "V.LIN".
4. Press the VOL. UP/DOWN button on the remote control until the SHIFT quantity of the OVER SCAN on upside and downside becomes minimum.

2-12: VERTICAL POSITION

1. Provide a monoscope pattern with the pattern generator.
2. Using the remote control, set the brightness and contrast to normal position.
3. Adjust the **VR401** until the horizontal line becomes fit to the notch of the shadow mask.
   (Refer to Fig. 2-6)

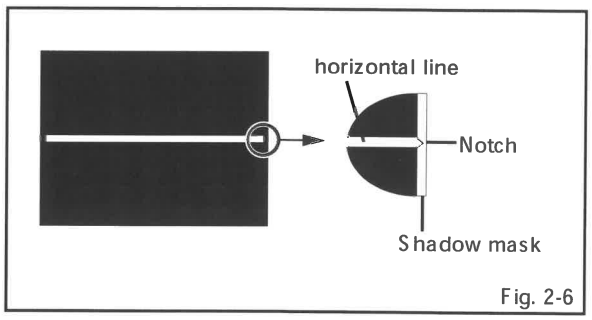


Fig. 2-6

2-13: VERTICAL SIZE

1. Provide a monoscope pattern with the generator.
2. Using the remote control, set the brightness and contrast to normal position.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(06)** on the remote control to select "V. SIZE".
4. Press the VOL. UP/DOWN button on the remote control until the SHIFT quantity of the OVER SCAN on upside and downside becomes 9± 2%.

2-14: PARABOLA

1. Provide a crosshatch pattern with a pattern generator.
2. Using the remote control, set the brightness and contrast to normal position.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(44)** on the remote control to select "PARABOLA".
4. Press the VOL. UP/DOWN button on the remote control, so that the line becomes straight from the outside of the right and left.

2-15: TRAPEZIUM

1. Provide a crosshatch signal from the Pattern Generator.
2. Using the remote control, set the brightness and contrast to normal position.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(45)** on the remote control to select "TRAPEZIUM".
4. Press the VOL. UP/DOWN button on the remote control until both ends of the right and left vertical lines of the 4th length lines screen become parallel.

ELECTRICAL ADJUSTMENTS

2-16: CORT OP/BTM

1. Provide a crosshatch signal from the Pattern Generator .
2. Set the screen mode to FULL.
3. Using the remote control, set the brightness and contrast to normal position.
4. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(46)** on the remote control to select "COR.TOP".
5. Press the VOL. UP/DOWN button on the remote control until both ends of the vertical lines become parallel.
6. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(47)** on the remote control to select "COR. BTM".
7. Press the VOL. UP/DOWN button on the remote control until both ends of the vertical lines of the screen become parallel.

2-17: BRIGHT CENT

1. Provide a monoscope pattern. (RF Input)
2. Set the screen mode to FULL.
3. Using the remote control, set the brightness and contrast to normal position.
4. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(29)** on the remote control to select "BRI. CENT".
5. Press the VOL. UP/DOWN button on the remote control until the white 10% is starting to be visible
6. Provide a monoscope pattern. (Audio Video Input)
7. Press the TV/AV button on the remote control to set to the AV mode. Then perform the above adjustments 2~5.
8. Provide a monoscope pattern. (YUV)
9. Press the TV/AV button on the remote control to set to the YUV mode.Then perform the above adjustments 2~5.

2-18: CONTRAST MAX

1. Provide a color bar pattern. (RF Input)
2. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(33)** on the remote control to select "CONT.MAX".
3. Press the VOL. UP/DOWN button on the remote control until the contrast step No. becomes "95".
4. Receive a broadcast and check if the picture is normal.
5. Provide a color bar pattern. (Audio Video Input)
6. Press the TV/AV button on the remote control to set to the AV mode. Then perform the above adjustments 2~4.
7. Provide a monoscope pattern. (YUV)
8. Press the TV/AV button on the remote control to set to the YUV mode.Then perform the above adjustments 2~4.

2-19: Confirmation of Fixed Value (Step No.)

Please check if the fixed values of each adjustment item is set correctly referring below.

NO.	FUNCTION	RF	AV	CS	DIGITAL
01	OSD C	01	01	01	01
04	H BLK L	02	02	02	02
05	H BLK R	00	00	00	00
07	V.POSI	01	01	01	01
09	VS CORR	14	14	14	14
10	V COMP	03	03	03	03
30	BRI.MAX	65	65	65	65
31	BRI.MIN	10	10	10	10
32	CONT.CENT	55	55	55	50
34	CONT.MIN	10	10	10	10
36	COL.MAX	127	127	127	127
37	COL.MIN	00	00	00	00
39	SHARP.CENT	27	27	27	27
40	SHARP.MAX	63	63	63	63
41	SHARP.MIN	05	05	05	05
42	SUB BIAS	00	00	00	00
48	TEST STEREO	00	00	00	00

ELECTRICAL ADJUSTMENTS

3. PURITY AND CONVERGENCE ADJUSTMENTS

NOTE

1. Turn the unit on and let it warm up for at least 30 minutes before performing the following adjustments.
2. Place the CRT surface facing east or west to reduce the terrestrial magnetism.
3. Turn ON the unit and demagnetize with a Degauss Coil.

3-1: STATIC CONVERGENCE (ROUGH ADJUSTMENT)

1. Tighten the screw for the magnet. Refer to the adjusted CRT for the position. **(Refer to Fig. 3-1)**
   If the deflection yoke and magnet are in one body, untighten the screw for the body.
2. Provide a green raster pattern from the color bar generator.
3. Slide the deflection yoke until it touches the funnel side of the CRT.
4. Adjust center of screen to green, with red and blue on the sides, using the pair of purity magnets.
5. Switch the color bar generator from the green raster pattern to the crosshatch pattern.
6. Combine red and blue of the 3 color crosshatch pattern on the center of the screen by adjusting the pair of 4 pole magnets.
7. Combine red/blue (magenta) and green by adjusting the pair of 6 pole magnets.
8. Adjust the crosshatch pattern to change to white by repeating steps 6 and 7.

NOTE

Adjust after performing adjustments in section 3-1.

1. Provide a green raster pattern from color bar generator.
2. Adjust the pair of purity magnets to center the color on the screen.
   Adjust the pair of purity magnets so the color at the ends are equally wide.
3. Move the deflection yoke backward (to neck side) slowly, and stop it at the position when the whole screen is green.
4. Confirm red and blue colors.
5. Adjust the slant of the deflection yoke while watching the screen, then tighten the fixing screw.

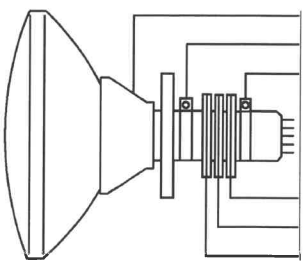


Fig. 3-1

3-3: STATIC CONVERGENCE

NOTE

Adjust after performing adjustments in section 3-2.

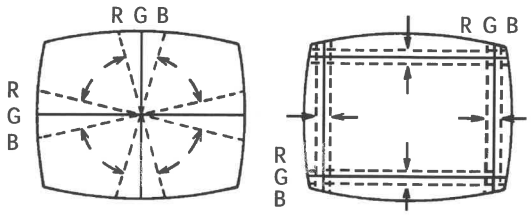
1. Provide a crosshatch pattern from the color bar generator.
2. Combine red and blue of the 3 color crosshatch pattern on the center of the screen by adjusting the pair of 4 pole magnets.
3. Combine red/blue (magenta) and green by adjusting the pair of 6 pole magnets.

3-4: DYNAMIC CONVERGENCE

NOTE

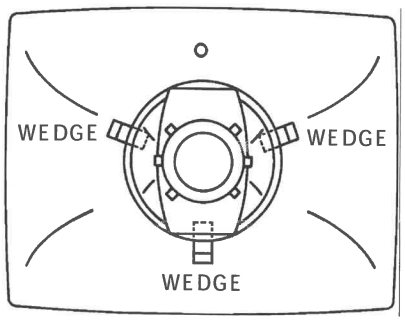
Adjust after performing adjustments in section 3-3.

1. Adjust the differences around the screen by moving the deflection yoke upward/downward and right/left. **(Refer to Fig. 3-2-a)**
2. Insert three wedges between the deflection yoke and
   CRT funnel to fix the deflection yoke. **(Refer to Fig. 3-2-b)**



UPWARD/DOWNWARD SLANT RIGHT/LEFT SLANT

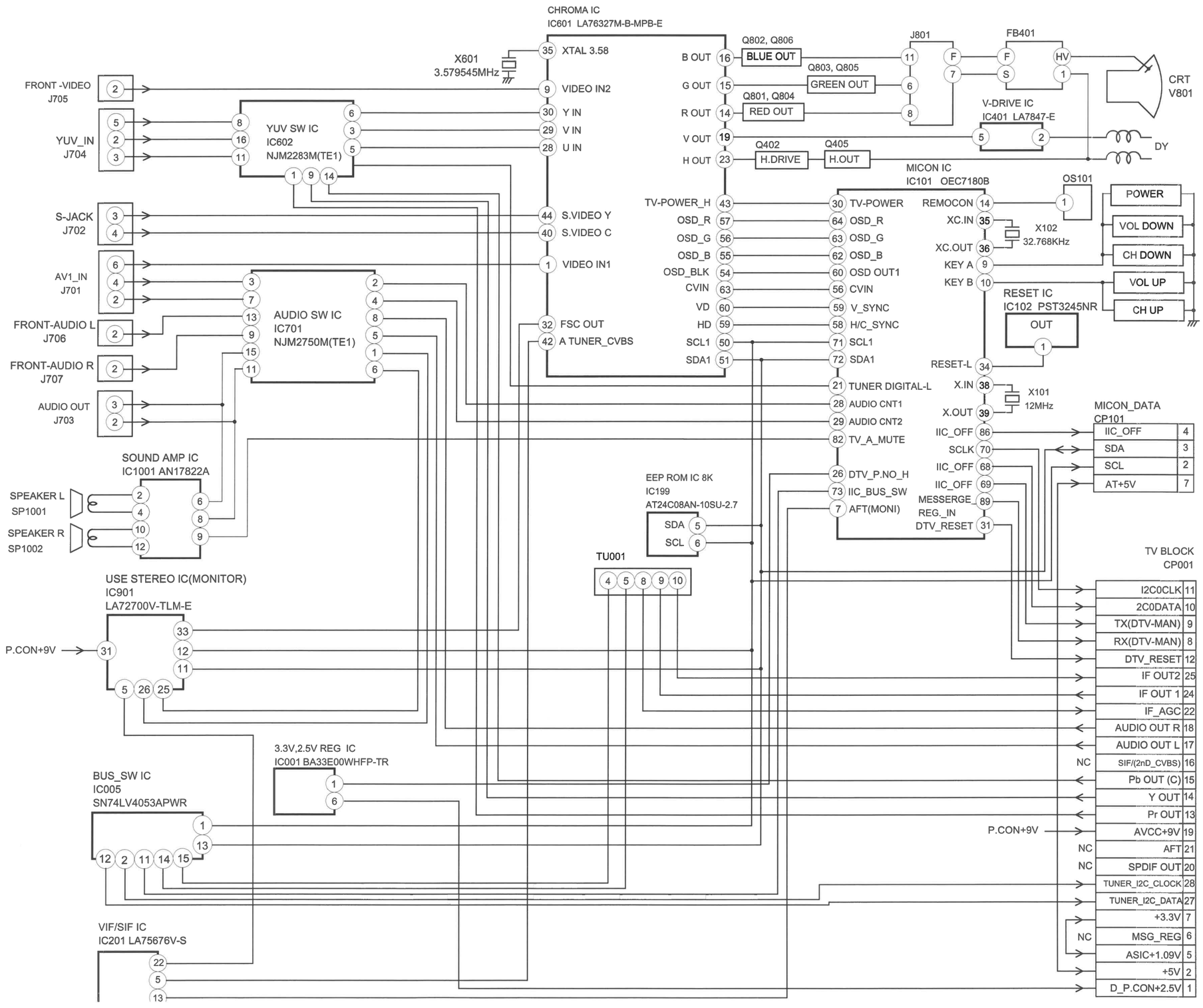
Fig. 3-2-a



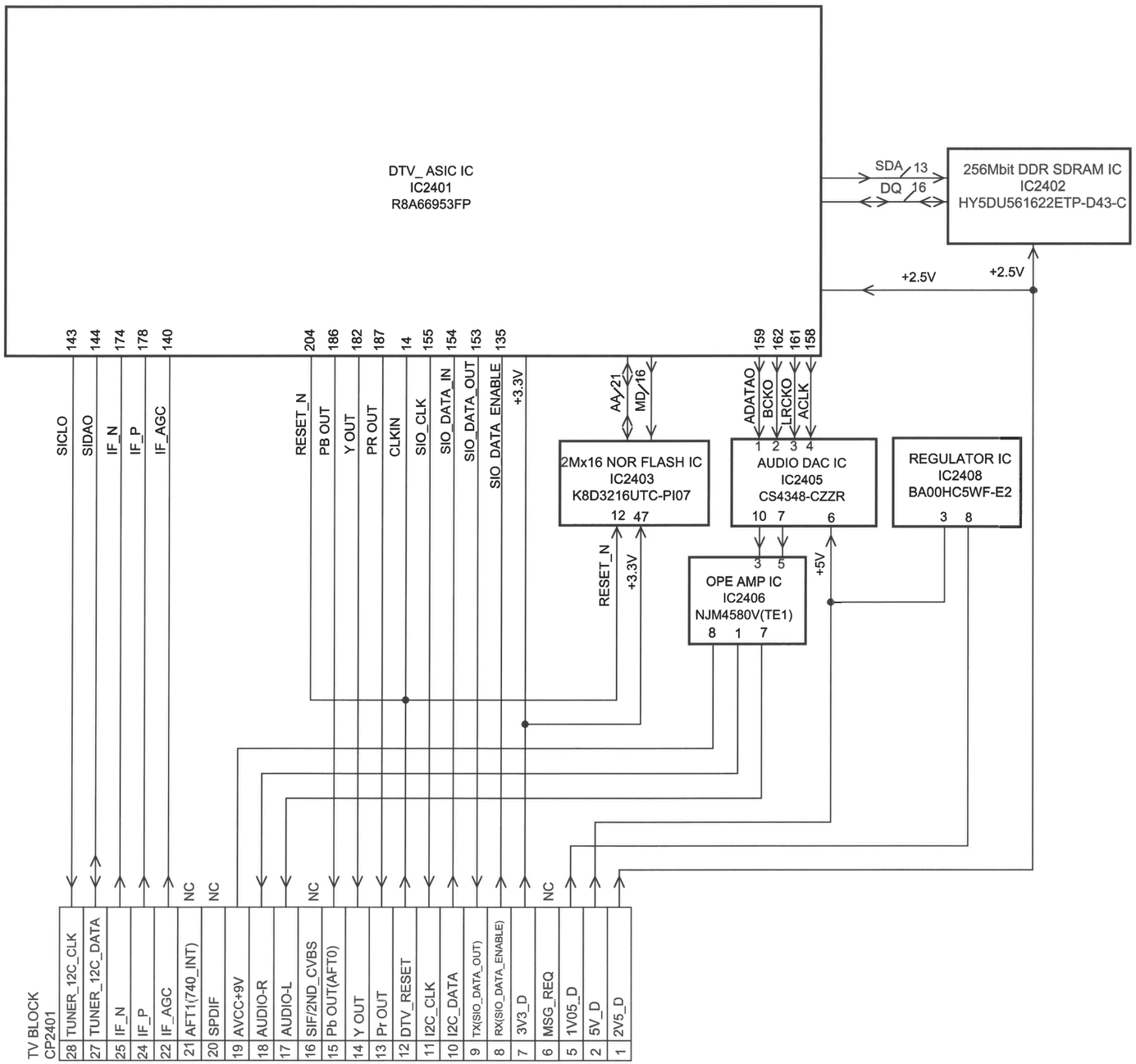
WEDGE POSITION

Fig. 3-2-b

MICON/CHROMA/DEFLECTION/TUNER/IF/AV SWITCH/SOUND AMP/CRT BLOCK DIAGRAM



DIGITAL BLOCK DIAGRAM



DISASSEMBLY INSTRUCTIONS

1. Back Removal

Remove the following screws as shown in the two figures below.

fig 1

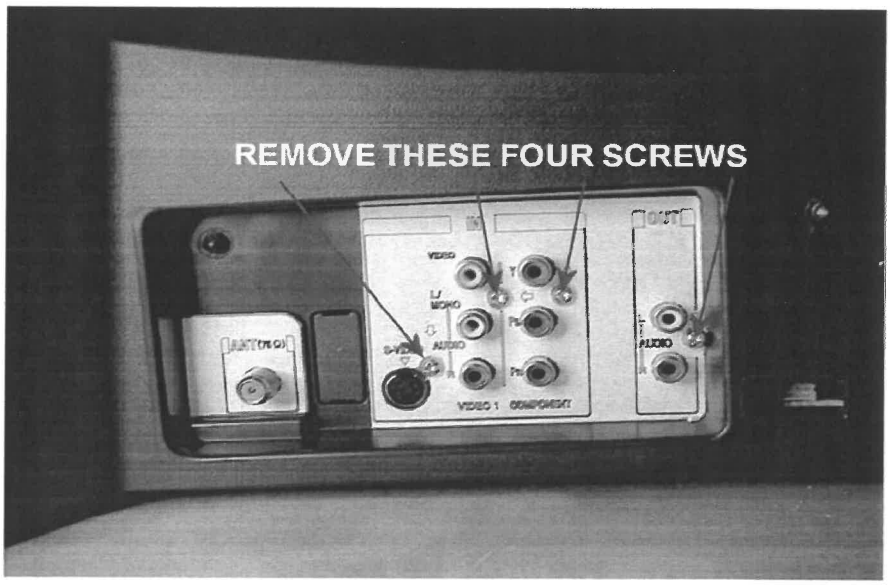


fig 2

DISASSEMBLY INSTRUCTIONS (cont)

2. Chassis Service Positions

Slide the Chassis back as shown in figure 3. This will allow servicing and measurements from the top of the Chassis.

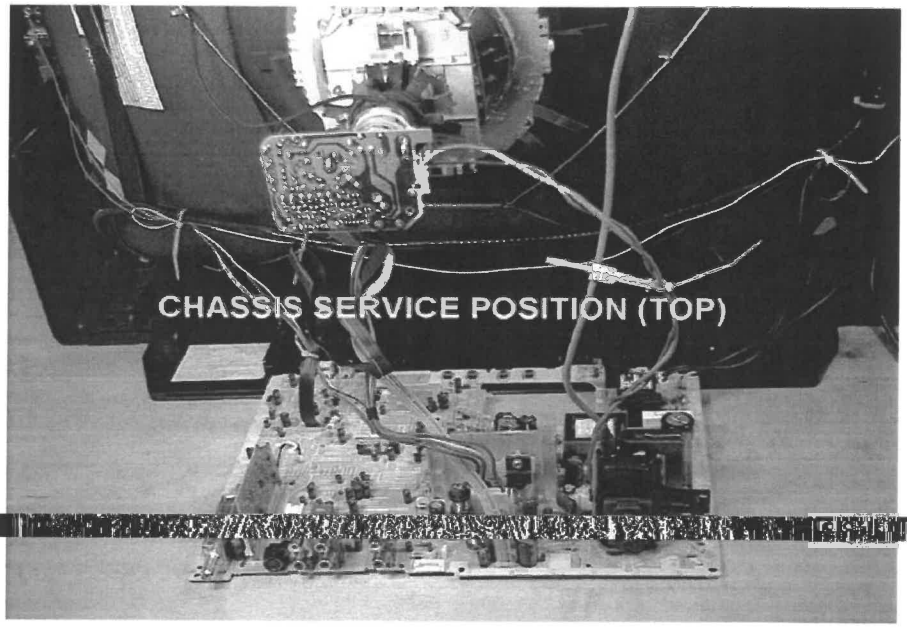


fig 3

Flip the Chassis up as shown in figure 4. This will allow servicing and measurements from the bottom of the Chassis.

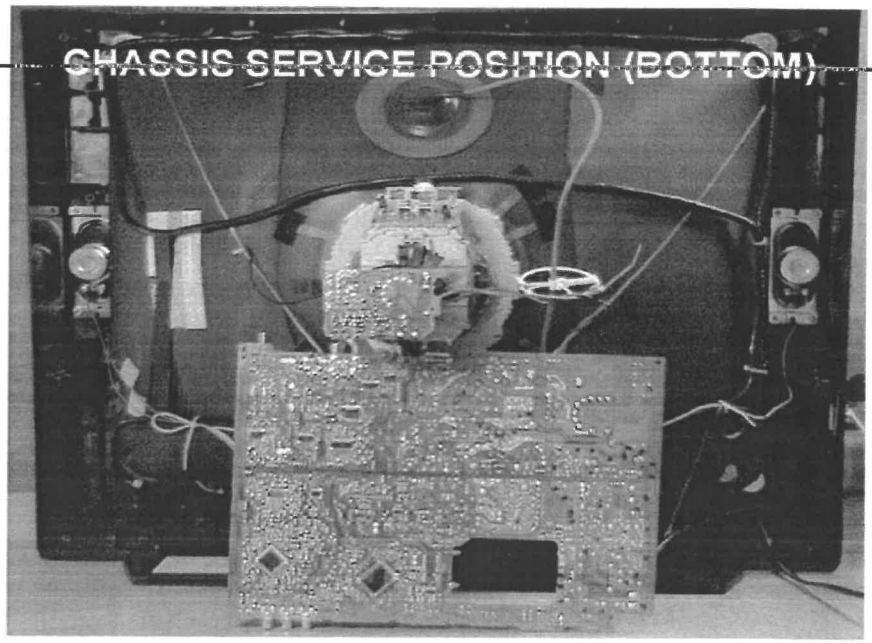
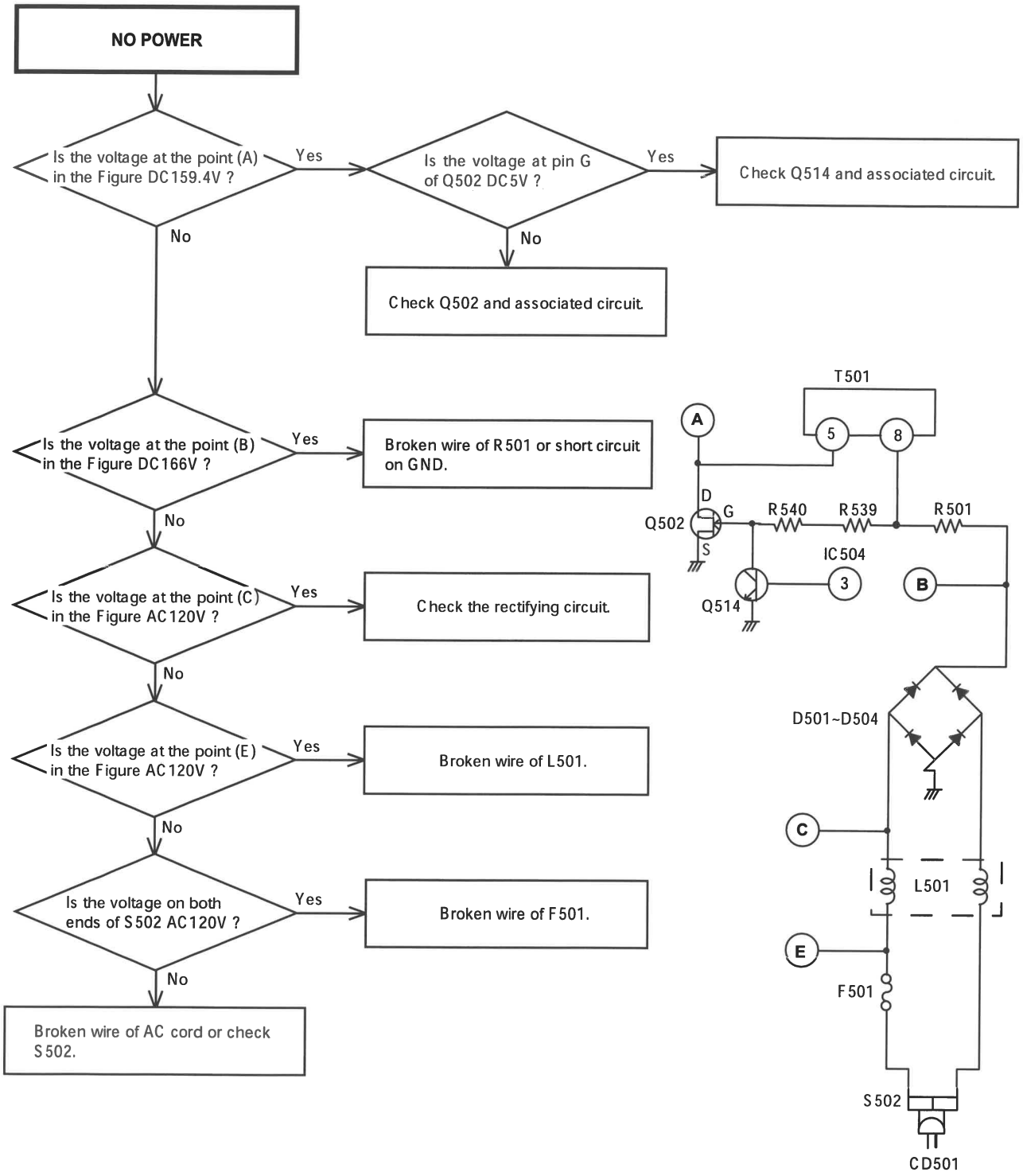


fig 4

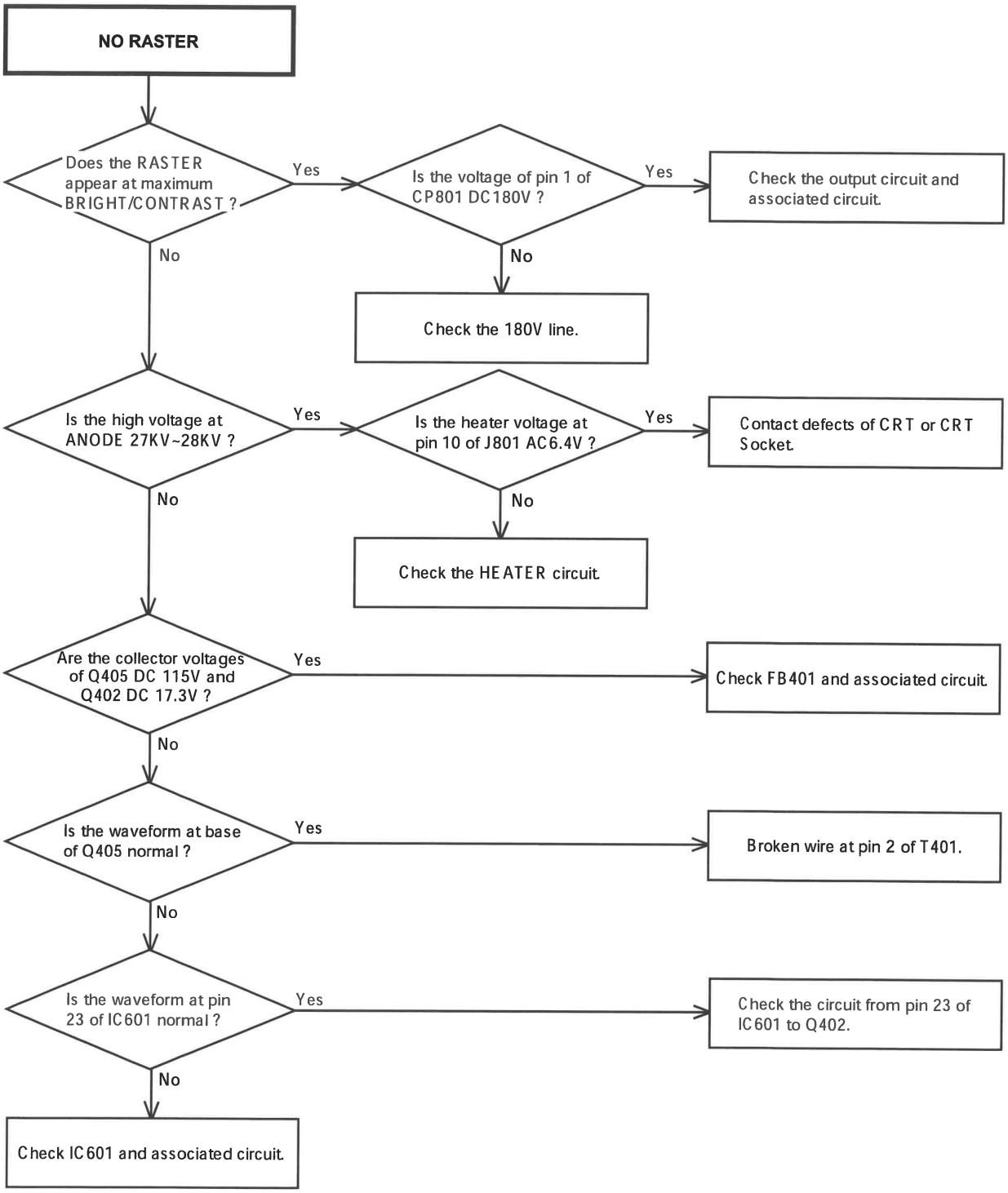
MECHANICAL REPLACEMENT PARTS LIST

REF. NO.	PART NO.	DESCRIPTION			
101	275531	FRONT CABI ASS'Y			
101A	N/A	CABINET FRONT			
101B		GUIDE,REMOCON	713WPA0305		
101C	275533	BUTTON FRAME			
101D	275534	STOPPER BUTT0N			
101E		FELT SHEET	800WQ0A052		5x150xT=0.3
101F		BADGE,BRAND	711WPCA037		
102	275532	BACK CABI ASS'Y			
102A	N/A	CABINET BACK			
102B		FELT SHEET	800WQ0A092		9x390xT=0.5
102C		FELT,SHEET	800WQ0A076		9x540xT=0.5
103		SPRING EARTH	741WUA0021		
104		COVER CONNECTOR	706WPAA012		
105		COVER CONNECTOR	706WPA0015		
106		SHEET RATING	722565A054		
107		SHEET,CSA	724000A008		
108		SHEET CRT SERVICEMAN	726000A160		
109		HOLDER CRT WIRE	762WPA0011		
110		WASHER CRT T=0.5	769WSAA008		
111		SHEET CRT SUPPORT	800WR0A002		
112		HOLDER ANODE WIRE	899HV3T000		
201		SCREW TAP TITE(P)	8110630B0U	BRAZIER	3x8
202		SCREW TAP TITE(P)	8110630A0U	BRAZIER	3x10
203		SCREW TAPPING(B0)	8117540B0U	TRUSS	4x20
204		SCREW TAP TITE(B)	8109I30A0U	WH7	3x10
205		SCREW TAP TITE(B)	810963080Q	BRAZIER	3x8 STAINLESS
206		SCREW,TAP TITE(P)	8141J60D5U	GW18	6x45 HEXAGON

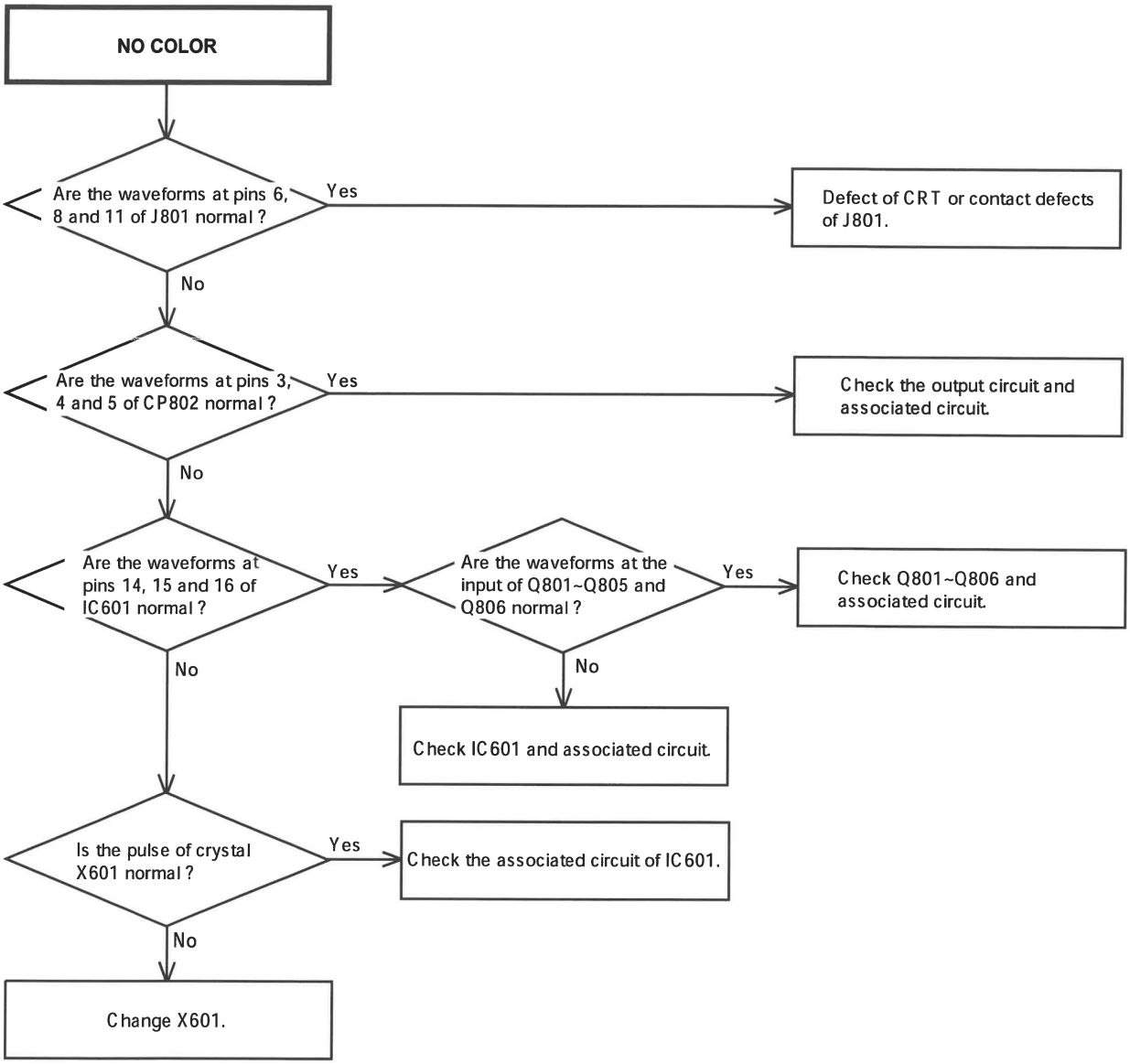
TROUBLESHOOTING GUIDE



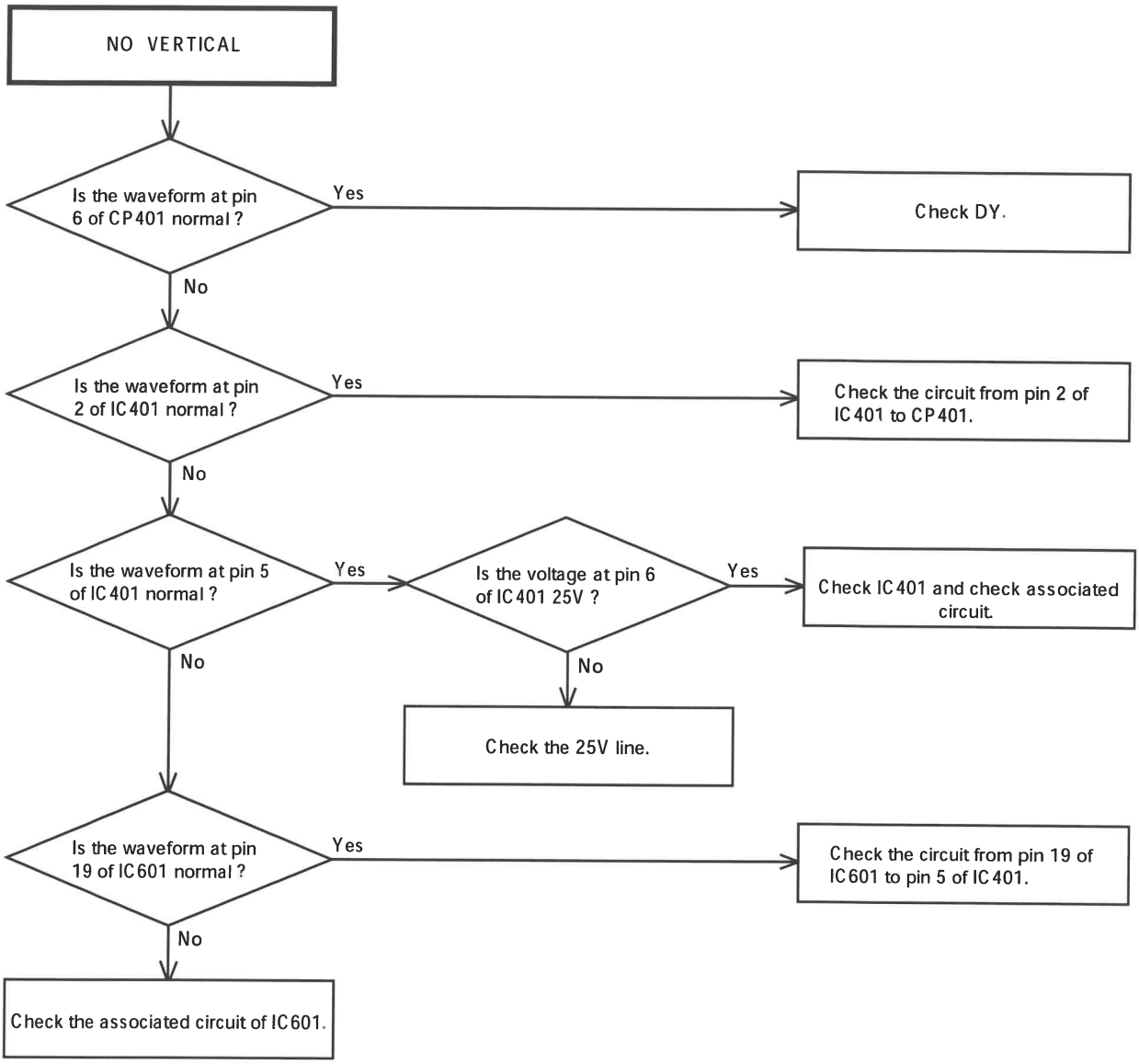
TROUBLESHOOTING GUIDE



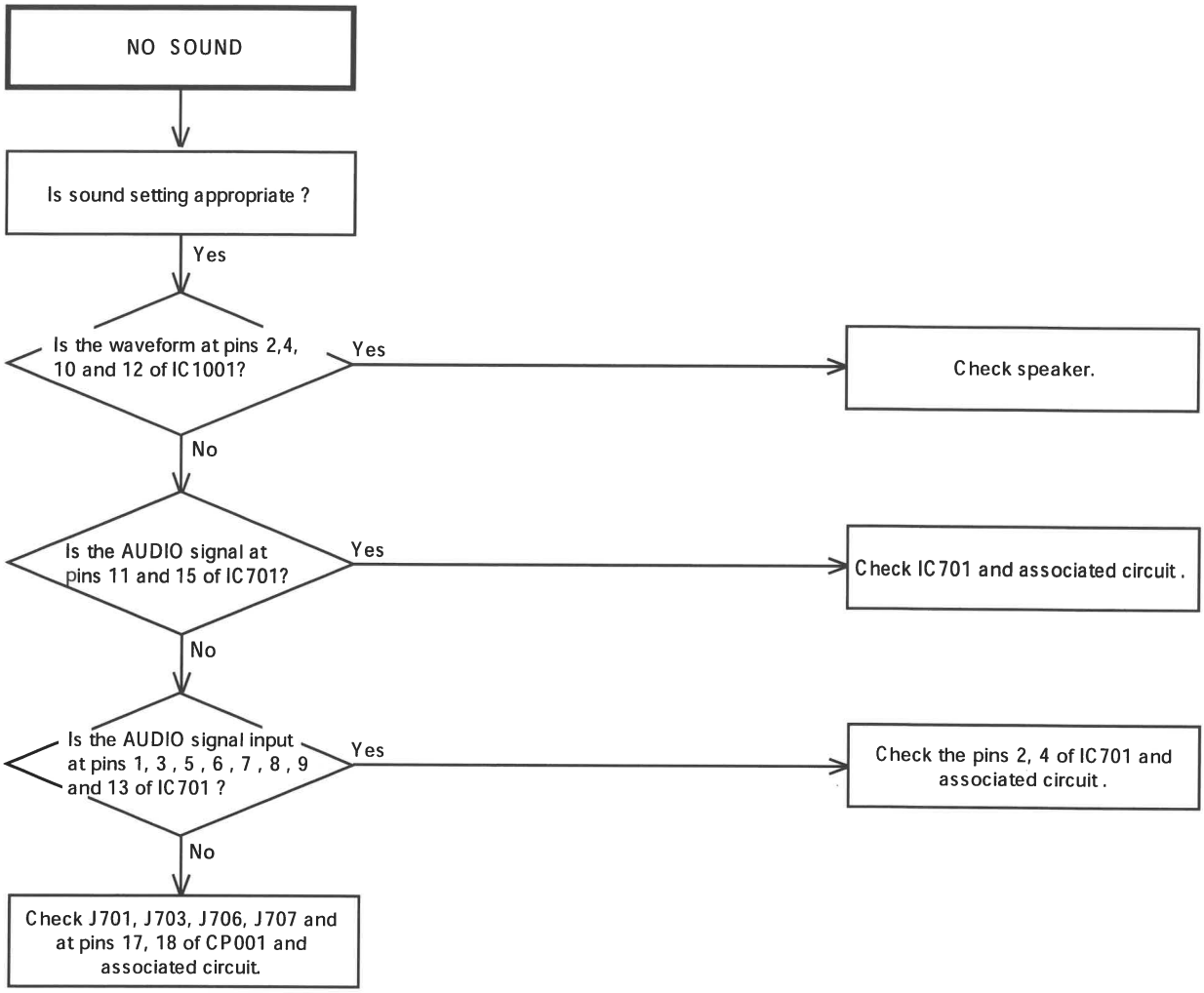
TROUBLESHOOTING GUIDE



TROUBLESHOOTING GUIDE



TROUBLESHOOTING GUIDE



GENERAL SPECIFICATIONS

G-1	TV System	CRT	CRT Size / Visual Size		27 inch / 676.0mmV
			CRT Type		Flat
			Magnetic Field BV/BH		+0.45G/0.18G
		Color System			NTSC
		Display Capability			480i
		Speaker			2Speaker
			Position		Front Side
			Size		1.8 x 3.9 Inch
			Impedance		8 ohm
		Sound Output	MAX		1.0 + 1.0 W
			10%(Typical)		- W
		NTSC3.58+4.43 /PAL60Hz			No
G-2	Tuning System	Broadcasting System	Analog		US System M
			Digital		ATSC(8VSB)/QAM
		Tuner and	System		1Tuner
		Receive CH	Destination		USA(W/ CABLE)
		CH Coverage			2 - 69, 4A, A-5 - A-1, A - I, J - W, W+1 - W+84
		Intermediate	Digital		44.00MHz
		Frequency	Analog	Picture(FP)	45.75MHz
				Sound(FS)	41.25MHz
				FP-FS	4.50MHz
		Preset CH			No
		Stereo/Dual TV Sound			Yes
		Tuner Sound Muting			Yes
G-3	Power	Power Source	AC		120V AC 60Hz
			DC		
		Power Consumption		at AC	110 W at AC 120 V 60 Hz
			Stand by (at AC)		3 W at AC 120 V 60 Hz
			Per Year		-- kWh/Year
		Energy Star			No
		Protector	Power Fuse		Yes
			Safety Circuit		Yes
			IC Protector(Micro Fuse)		No
G-4	Regulation		Safety		UL(UL1492) / CSA (CSA C.22.2 NO.1)
			Radiation		FCC/ IC
			X-Radiation		DHHS/HWC
G-5	Temperature		Operation		+5°C ~ +40°C
			Storage		-20°C ~ +60°C
G-6	Operating Humidity				Less than 80% RH
G-7	OSD Language				English French Spanish
G-8	Clock and Timer	Clock			Yes
		Clock Display			12H
		Calendar			Yes
		Sleep Timer	Max Time		120 Min
			Step		10 Min
		On Timer/Off Timer	Program		No
		Game Timer			No
		Wake Up Timer			No
		Timer Back-up (at Power Off Mode)	more than		-- Min Sec

GENERAL SPECIFICATIONS

G-9	Remote Control	Unit		RC-PS
		Glow in Dark Remocon		No
		Format		THOMSON
		Remocon Format		THOMSON
		Custom Code		0 h
		Power Source	Voltage(D.C)	3V
			UM size x pcs	UM-4 x 2 pcs
		Total Keys		26 Keys
		Keys	Power	Yes
			1	Yes
			2	Yes
			3	Yes
			4	Yes
			5	Yes
			6	Yes
			7	Yes
			8	Yes
			9	Yes
			0	Yes
			100	No
			CH Up/MENU Cursor Up	Yes
			CH Down/MENU Cursor Down	Yes
			Volume Up/MENU Cursor Right	Yes
			Volume Down/MENU Cursor Left	Yes
			Closed Caption	Yes
			CH1/CH2	No
			TV/Video(TV/AV)	Yes
			CH RTN(Quick View)	Yes
			Sleep	Yes
			Display(Call) / -	Yes
			Reset	No
			Menu	No
			Enter	No
			Menu/Enter	Yes
			Mute	Yes
			Exit	Yes
			Audio Select	Yes
			Set +	No
			Set -	No
			Picture Size	Yes
			Analog/Digital	Yes

GENERAL SPECIFICATIONS

G-10	Features	Picture	Brightness, Contrast, Color, Tint, Sharpness	Yes
			Mode (Picture preference)	No
			Color Temperature	No
		Audio	SAP	Yes
			Tone Control (Bass, Treble, Balance)	No
			Stable Sound	No
			BBE	No
			SRS WOW(SRS 3D/Focus/Tru Bass)	No
			Variable Audio Out	No
		Tuning	TV/CABLE	Yes
			CH Program	Yes
			Add/ Delete	Yes
		Label	CH Label	No
			Video Label	No
		Favorite CH		No
		Lock	Hotel Lock	No
			Channel Lock	No
			Video Lock	No
			Panel Lock	No
		Auto Shut Off		Yes
		Auto Setup		No
		Power On Memory		Yes
		V-Chip		Yes
			Type	USA, ORION Type
		RRT		Yes
		Image Tilt		No
		SVM Circuit		No
		Comb Filter		No
		Cable Clear		No
		Cinema Mode		No
		Display Format		No
		Aspect		No
		Closed Caption		Yes
		CC Advance		Yes
		CC Setting		Yes
		Signal Meter		No
		Audio Language		Yes
		Picture Size		Yes
		Zoom		Yes
		Picture Scroll		No
		FBT Leak Test Protect		No
		Menu=Volume Up+Volume Down		Yes
		POD (Point Of Deployment)		No
		TV Guide (EPG)		No
		Digital Out	Dolby Digital	No
			MPEG	No
			PCM	No
			DTS	No
		HDMI Input		No
		Component Input		Yes
			720×480i (4:3)	Yes (60Hz)
			720×480i (16:9)	Yes (60Hz)
			720×480p (4:3)	No
			720×480p (16:9)	No
			720×576i (4:3)	No
			720×576i (16:9)	No
			720×576p (4:3)	No
			720×576p (16:9)	No
			1280×720p	No
			1920×1080i	No

GENERAL SPECIFICATIONS

G-11	Accessories	Owner's Manual		Language	English/ Spanish
				W/ Guarantee Card	Yes
		Remote Control Unit			Yes
		Rod Antenna			No
				Poles	
				Terminal	
		Loop Antenna			No
				Terminal	
		U/V Mixer			No
		DC Car Cord (Center+)			No
		Guarantee Card			No
		Warranty Sheet(US)			No
		Warranty Sheet(Canada)			No
		Warning Sheet			No
		Circuit Diagram			No
		Antenna Change Plug			No
		Service Station List			No
		Important Safeguard			Yes (English/Spanish/French)
		Dew/AHC Caution Sheet			No
		AC Plug Adapter			No
		Quick Set-up Sheet			No
		Battery			Yes
				UM size x pcs	UM-4 x 2 pcs
				OEM Brand	No
		AC Cord			No
		AV Cord (2Pin-1Pin)			No
		Registration Card			Yes (English Only)
		PTB Sheet			No
		ESP Card			No
		300 ohm to 75 ohm Antenna Adapter			No
		Information Sheet(for HDMI)			No
		Information Sheet(RETURN)			No
		Information Sheet(Channel)			No
		Information Sheet(RRT)			No
G-12	Interface	Switch	Front	Power	Yes
				Channel Up/Menu Up	Yes
				Channel Down/Menu Down	Yes
				Volume Up/Menu Right	Yes
				Volume Down/Menu Left	Yes
		Indicator		Power	No
				Stand-by	No
				On Timer	No
		Terminals	Front	Video Input = VIDEO2	RCA
				Audio Input = VIDEO2	RCA x 2 (L/MONO,R)
				S Input	No
				Other Terminal	No
			Rear	Video Input(Rear1) = VIDEO1	RCA
				Video Input(Rear2) = VIDEO3	No
				S Input = VIDEO1	Yes
				S Input = VIDEO3	No
				Audio Input(Rear1) = VIDEO1	RCA x 2 (L/MONO,R)
				Audio Input(Rear2) = VIDEO3/Component	No
				Video Output	No
				Audio Output	RCA x 2(L,R)
				Component Input1	RCA x 3
				Component Input2	No
				HDMI Input1(w/ Analog Audio L/R)	No
				HDMI Input2(w/ Analog Audio L/R)	No
				Digital Audio Out	No
				Cable Card Slot	No
				IR Blaster	No
				VHF/UHF Antenna Input	F Type
				AC Outlet	No

GENERAL SPECIFICATIONS

G-13	**Set Size**		Approx. W x D x H (mm)	740 x 494.5 x 575
G-14	**Weight**		Net (Approx.)	40.0kg (88.2lbs)
			Gross (Approx.)	46.5kg (102.5lbs)
G-15	**Carton**	Master Carton		No
			Content	---- Sets
			Material	-- /--
			Dimensions W x D x H(mm)	-- x -- x --
			Description of Origin	No
		Gift Box	Material	Double/Brown
			W/Color Photo Label	No
			Dimensions W x D x H(mm)	850 x 620 x 665
			Description of Origin	Yes
		Drop Test		Natural Dropping At 1 Corner / 3 Edges / 6 Surfaces
			Height (cm)	25
		Container Stuffing		156 Sets/40' container
G-16	**Material**	Cabinet	Cabinet Front	PS 94V0 DECABROM
			Cabinet Rear	PS 94V0 DECABROM
		PCB	Non-Halogen Demand	No
			Eyelet Demand	Yes
G-17	**Environment**	Environmental standard requirement		Green procurement of ORION
		Pb- Free		Phase3(PHASE3A)
			Measures for Whisker	Yes

27F554T Voltage Charts

IC001

Pins	Standby	Run
1	0	4.9
2	4.7	4.9
3	4.7	4.9
4	0	0
5	0.2	3.3
6	0	2.5
7	0	0.8

IC005

Pins	Standby	Run
1	5.1	3
2	3.4	4.4
3	0	0.3
4	0	0
5	0.7	0
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
11	0	0
12	3.4	4.4
13	5.1	3
14	5.1	4.4
15	5.1	4.4
16	5.1	5.1

IC102

Pins	Standby	Run
1	5.1	5.1
2	5.1	5.1
3	0	0
4	0	0
5	0	0

IC199

Pins	Standby	Run
1	0	0
2	0	0
3	0	0
4	0	0
5	5.1	3
6	5.1	3
7	0	0
8	5.1	4.9

IC201

Pins	Standby	Run
1	0	2.2
2	0	2.3
3	0	2
4	0.2	0
5	0	4.7
6	0	2.5
7	0	2.4
8	0	2.1
9	0	2.7
10	0	2.1
11	0	4
12	0	4
13	0	2.4
14	0	4.7
15	0	2.3
16	0	2.3
17	0	2.3
18	0	2.8
19	0	2.8
20	0	0
21	0	3
22	0	2.1
23	0	3
24	0	2.4

IC101

Pins	Standby	Run
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	1.2
8	0	2.3
9	5.1	5.1
10	5.1	5.1
11	0	0
12	0	0
13	0	0
14	5.1	5.1
15	0	0
16	0	0
17	0	0
18	0	0
19	0	0
20	0	0
21	0	5.1
22	0	0
23	0	5.1
24	0	0.2
25	0	0.2

Pins	Standby	Run
26	0	5.1
27	0	0
28	0	5.1
29	0	5.1
30	0	5.1
31	0.1	3.3
32	0	5.1
33	0.1	0
34	5.1	5.1
35	1.5	1.5
36	1.5	1.5
37	5.1	5.1
38	4.7	4.7
39	1	0.9
40	0	0
41	0	0
42	0	0
43	5.1	5.1
44	2.4	2.3
45	2.4	2.3
46	0	0
47	0	0
48	0	0
49	0	0
50	5.1	5.1

Pins	Standby	Run
51	0	0
52	0	0
53	5.1	5.1
54	0	2.4
55	2.6	1.7
56	1	1.5
57	0	0
58	0	4
59	0	4.7
60	0	0
61	0	5.1
62	0	0
63	0	0
64	0	0
65	0	0
66	0	0
67	0	0
68	0	5.1
69	0	0.2
70	0	5.1
71	5.1	3
72	5.1	3
73	0	0
74	0	0
75	0	0

Pins	Standby	Run
76	0	0
77	0	0
78	0	0
79	0	0
80	0	0
81	5.1	5.1
82	5.1	5.1
83	5.1	0
84	0	0
85	5.1	5.1
86	5.1	5.1
87	0	0
88	0	0
89	0	0
90	0	0
91	2.5	2.5
92	2.5	2.5
93	0.1	0.1
94	0.8	0.8
95	0.1	0.1
96	2.4	2.4
97	0.3	0.3
98	5.1	5.1
99	5.1	5.1
100	0	0

IC401

Pins	Standby	Run
1	0	0
2	0.4	14.9
3	1.4	25.9
4	0	2.5
5	0	2.5
6	0.1	25.9
7	0.1	2.4
8	0	2.3
9	0	2.3
10	0	11.3

IC502

Pins	Standby	Run
1	5.9	7.9
2	4.9	6.8
3	0.2	0.4
4	5.4	29.1

27F554T Voltage Charts

IC601

Pins	Standby	Run
1	0.2	2.4
2	5.1	5.1
3	0	2.5
4	5.8	5.7
5	0.1	0.1
6	8.6	8.5
7	0	2.4
8	0	3.4
9	0.1	2.4
10	0	2.3
11	0.3	8.4
12	0	1.8
13	0	7.7
14	0	1.8
15	0	1.8
16	0	1.8
17	0	0
18	0.1	2.1
19	0	2.1
20	0.1	2.4
21	0	5.1
22	0.2	2.5
23	0	0.8
24	0	0
25	0	0.8

Pins	Standby	Run
26	0	1.6
27	0	0
28	0	3.1
29	0	3
30	0	2.5
31	0	0
32	0	1.7
33	0	2.5
34	0.1	3.3
35	0	2.7
36	0	4.7
37	0	1.8
38	0	0.1
39	0.2	5.4
40	0	0
41	0	0
42	0.2	2.7
43	0	5
44	0	2.4
45	0	0.3
46	0	2.4
47	0	2.4
48	0	2.4
49	0	0
50	5.1	2.9

Pins	Standby	Run
51	5.1	2.9
52	0	0
53	0	4.7
54	0	0.5
55	0	0
56	0	0
57	0	0
58	0.1	0
59	0	0.1
60	0	4.7
61	0	0
62	0	1.8
63	0	2
64	0	0

IC602

Pins	Standby	Run
1	0	7.4
2	0	3
3	0	4
4	0	0
5	0	4
6	0	4
7	0	3
8	0.2	4.7
9	0.2	4.7
10	0	0
11	0	4.7
12	0	3
13	0	9.3
14	0	4.7
15	0	0
16	0	4.7

IC701

Pins	Standby	Run
1	0.1	4.6
2	0	4.8
3	0.1	4.6
4	0	4.8
5	0.1	4.7
6	0	3.8
7	0	4.6
8	0	4.8
9	0	4.6
10	0.1	0
11	0	4.7
12	0	4.7
13	0	4.6
14	0	9.3
15	0	0
16	0	0

IC901

Pins	Standby	Run
1	0	3.8
2	0	3.8
3	0.2	3.8
4	0.1	3.8
5	0	3.7
6	0	0
7	0.2	4.3
8	0	0.4
9	0.3	2.7
10	0	0.1
11	5.1	3
12	5.1	3
13	0	2.4
14	0	3.2
15	0	2
16	0.3	4
17	0.3	0
18	0.3	3.8
19	0	4
20	0.3	3.9
21	0.2	3.9
22	0	3.9
23	0	3.9
24	0	0.3
25	0	3.9

Pins	Standby	Run
26	0.1	3.9
27	0	3.9
28	0	3.8
29	0	3.8
30	0	1.2
31	0	9.1
32	0	1
33	0	0
34	0	2.4
35	0	6.2
36	0	6.2

IC1001

Pins	Standby	Run
1	5.8	6.3
2	0	2.2
3	0	0
4	0	2.2
5	0	3.5
6	0.9	1.4
7	0	0
8	0.9	1.4
9	0	0
10	0	2.2
11	0	0
12	0	2.2

CP001 Connector

Pins	Standby	Run
1	0	2.5
2	0	5.1
3	0	0
4	0	0
5	3.8	2.7
6	0	0
7	0.2	3.3
8	0.3	0.1
9	0.3	0.2
10	0.3	3.3
11	0.1	3.3
12	0	3.3
13	0	0.9
14	0	0
15	0	0
16	0	0.1
17	0.4	4.6
18	0.4	4.6
19	0.9	9.2
20	0	0
21	0	0
22	0	1.6
23	0	0
24	0	0
25	0	0

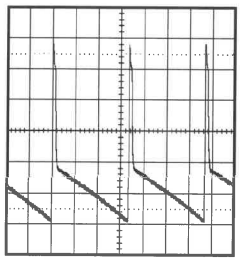
Pins	Standby	Run
26	0	0
27	0.2	3.2
28	3.3	4.4

WAVEFORMS

DEFLECTION

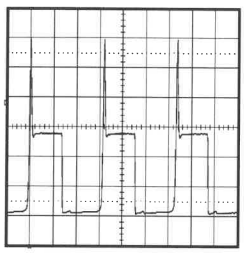
POWER ON
5ms
10.0V

(18)



20µs
20V

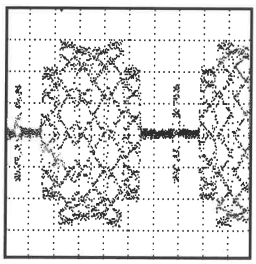
(19)



CHROMA

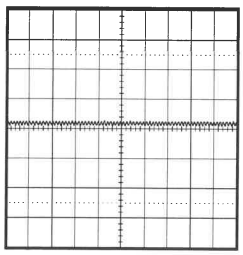
10µs
200mV

(20)



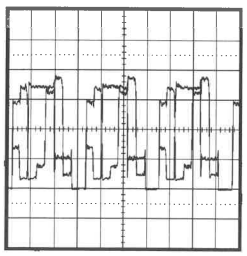
2µs
1V

(21)



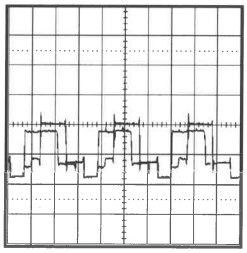
20µs
1V

(22)



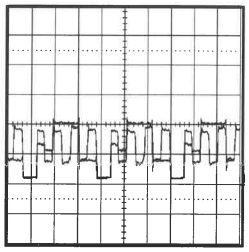
20µs
2V

(23)



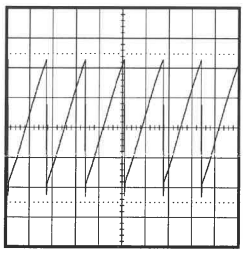
20µs
2V

(24)



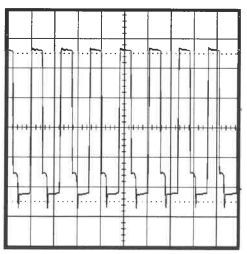
10ms
0.5V

(25)



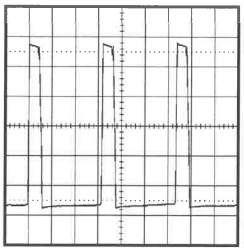
50µs
1V

(26)



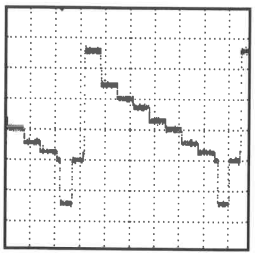
20µs
2V

(27)



10µs
200mV

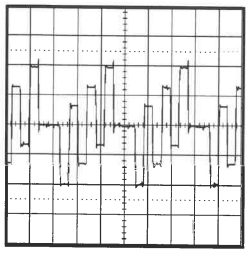
(28)



AV SWITCH/SOUND AMP

20µs
200mV

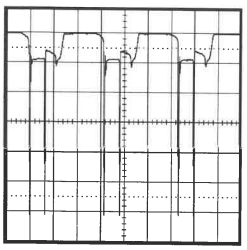
(29)



DEFLECTION

20µs
2V

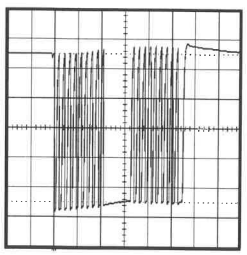
(30)



MICON

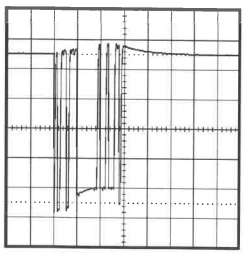
50µs
1V

(33)



0.1ms
1V

(34)



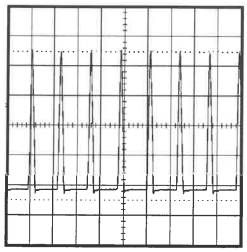
NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

WAVEFORMS

DEFLECTION

50µs
200V

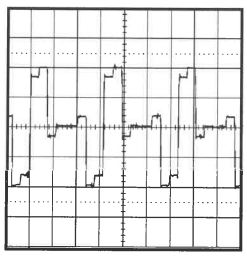
(35)



AV SWITCH/SOUND AMP

20µs
200mV

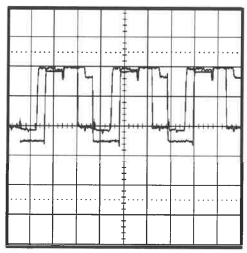
(36)



CRT

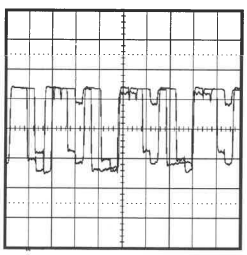
20µs
50V

(37)



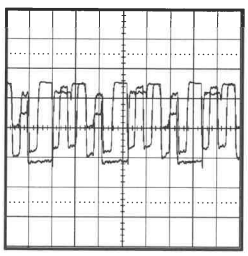
20µs
50V

(38)



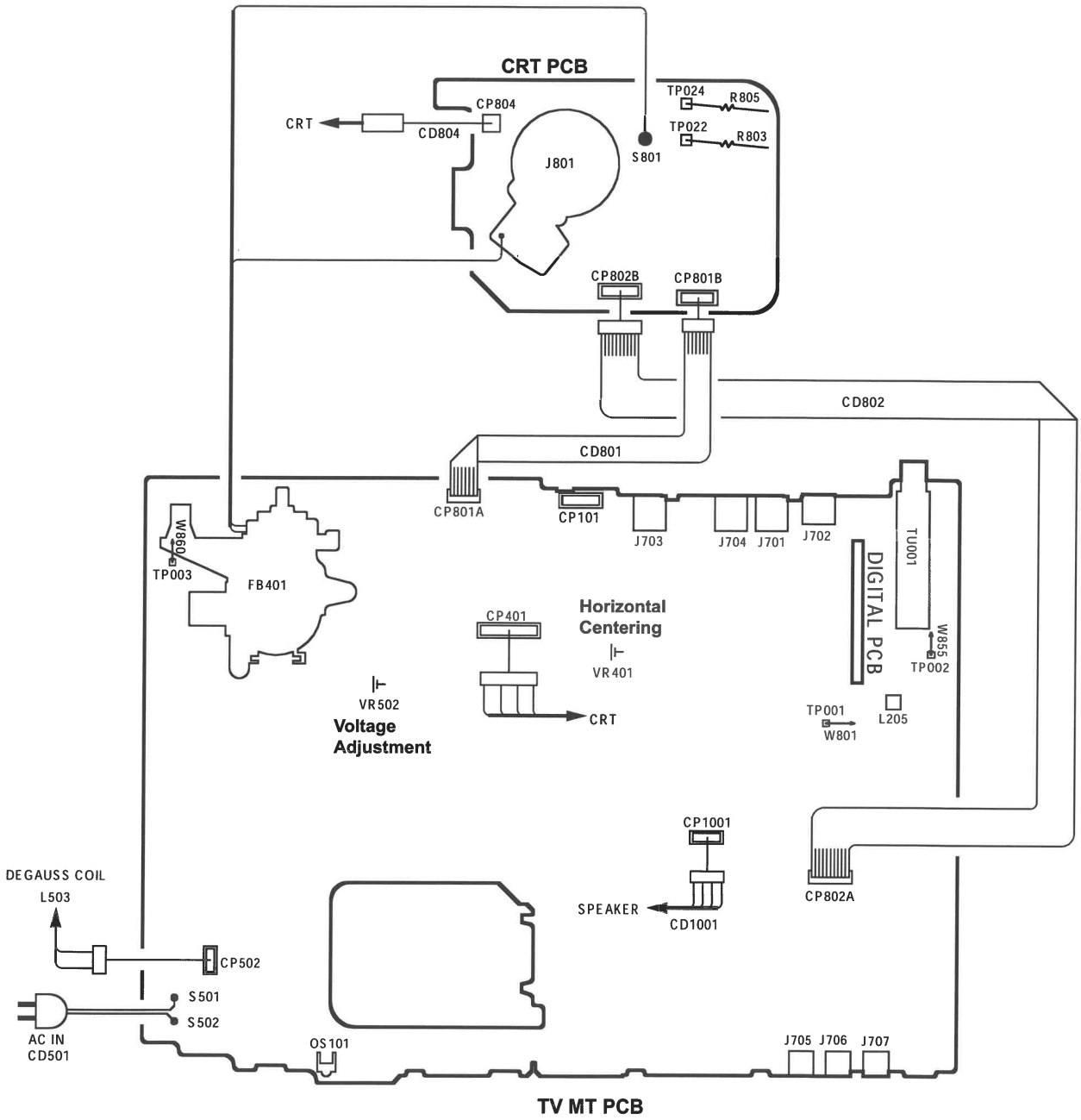
20µs
50V

(39)



NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

27F554T WIRING DIAGRAM



SERVICE MODE LIST

This unit is provided with the following SERVICE MODES so you can repair, examine and adjust easily.
To enter the Service Mode, press both set key and remote control key for more than 2 seconds.

Set Key	Remote Key	Operations
VOL. (-) MIN	0	Releasing of V-CHIP PASSWORD.
VOL. (-) MIN	6	Check for the firmware version. Can be checked of the INITIAL DATA of MEMORY IC. Refer to the "WHEN REPLACING EEPROM (MEMORY) IC".
VOL. (-) MIN	9	Display of the Adjustment MENU on the screen. Refer to the "ELECTRICAL ADJUSTMENT" (On-Screen Display Adjustment).

ELECTRICAL ADJUSTMENTS

1. ADJUSTMENT PROCEDURE

Read and perform these adjustments when repairing the circuits or replacing electrical parts or PCB assemblies.

CAUTION

- Use an isolation transformer when performing any service on this chassis.
- Before removing the anode cap, discharge electricity because it contains high voltage.
- When removing a PCB or related component, after unfastening or changing a wire, be sure to put the wire back in its original position.
- When you replace an IC or Transistor with a heat sink, apply silicon grease on the contact section of the heat sink. Before applying new silicon grease, remove all the old silicon grease. (Old grease may cause damages to the IC and Transistor.)

Prepare the following measurement tools for electrical adjustments.

1. Oscilloscope
2. Digital Voltmeter
3. Multi-sound Generator
4. Pattern Generator
5. AFC Oscillator

On-Screen Display Adjustment

1. In the condition of ***NO*** indication on the screen, press the VOL. DOWN button on the set and the Channel button **(9)** on the remote control for more than 2 seconds to appear the adjustment mode on the screen as shown in **Fig. 1-1** .

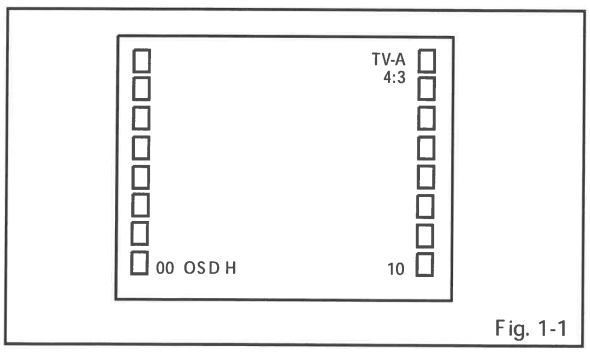


Fig. 1-1

2. Use the Channel UP/DOWN button or Channel button **(0-9)** on the remote control to select the options shown in **Fig. 1-2** .
3. Press the MENU button on the remote control to end the adjustments.
4. To display the adjustment screen for TV-A, TV-D, AV and YUV mode, press the TV/AV button on the remote control. Press the VOL.DOWN button on the set and the channel **(9)** on the remote control for more than 2 seconds.

NO.	FUNCTION	NO.	FUNCTION
00	OSD H	32	CONT.CENT
01	OSD C	33	CONT.MAX
02	CUT OFF	34	CONT.MIN
03	H.POSI	35	COL.CENT
04	H BLK L	36	COL.MAX
05	H BLK R	37	COL.MIN
06	V. SIZE	38	TINT CENT
07	V. POSI	39	SHARP.CENT
08	V. LIN	40	SHARP.MAX
09	VS CORR	41	SHARP.MIN
10	V COMP	42	SUB BIAS
11	R.BIAS	43	H.SIZE
12	G.BIAS	44	PARABOLA
13	B.BIAS	45	TRAPEZIUM
14	R.DRV	46	COR TOP
15	G.DRV	47	COR BTM
16	B.DRV	48	TEST STEREO
29	BRI.CENT		
30	BRI.MAX		
31	BRI.MIN		

Fig. 1-2

2. BASIC ADJUSTMENTS

2-1: CONSTANT VOLTAGE

1. Place the set in AV MODE without signal.
2. Connect the digital voltmeter to the **TP003** .
3. Adjust the **VR502** until the digital voltmeter is 130 ± 0.5V.

2-2: AFT

1. Place the set in an Aging Test for more than 15 minutes
2. Connect the AFC Oscillator 45.75MHz to the **TP002** .
3. Connect the digital voltmeter to the **TP001** .
4. Adjust the **L205** until the digital voltmeter is 2.3 ± 0.1V.

2-3: CUT OFF

1. Place the set in an Aging Test for more than 15 minutes
2. Place the set in AV MODE without signal.
3. Using the remote control, set the brightness and contrast to normal position.
4. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(02)** on the remote control to select "CUT OFF".
5. Adjust the **Screen Volume** until a dim raster is obtained.

2-4: FOCUS

1. Provide a the monoscope pattern with a pattern generator.
2. Turn the Focus Volume fully counterclockwise once.
3. Adjust the **Focus Volume** until picture is distinct.

2-5: WHITE BALANCE

NOTE: Adjust after performing CUT OFF adjustment.

1. Place the set in Aging Test for more than 15 minutes.
2. Provide the white 100% signal from the Pattern Generator.
3. Using the adjustment control, set the brightness and contrast to normal position.
4. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(11)** on the remote control to select "R.BIAS".
5. Using the VOL. UP/DOWN button on the remote control, adjust the R.BIAS.
6. Press the CH. UP/DOWN button on the remote control to select the "R.DRV", "B.DRV", "G.BIAS" or "B.BIAS".
7. Using the VOL. UP/DOWN button on the remote control, adjust the R.DRV, B.DRV, G.BIAS or B.BIAS.
8. Perform the above adjustments 6 and 7 until the white color is achieved.

ELECTRICAL ADJUSTMENTS

2-6: TINT

1. Provide a color bar pattern with the generator. (RF Input)
2. Using the remote control, set the brightness, contrast, color and tint to normal position.
3. Connect the oscilloscope to **TP024** .
4. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(38)** on the remote control to select "TINT".
5. Press the VOL. UP/DOWN button on the remote control until the section A1 and A2 becomes as straight line. **(Refer to Fig. 2-1)**
6. Provide a monoscope pattern. (Audio Video Input)
7. Press the TV/AV button on the remote control to set to the AV mode. Then perform the above adjustments 2~5.
8. Provide a monoscope pattern. (YUV)
9. Press the TV/AV button on the remote control to set to the YUV mode.
10. Using the remote control, set the brightness, contrast, color and tint to normal position.
11. Connect the oscilloscope to **TP024** .
12. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(38)** on the remote control to select "TINT".
13. Press the VOL. UP/DOWN button on the remote control until the section A1 and A2 becomes as straight line. **(Refer to Fig. 2-2)**
14. Provide a ATSC monoscope pattern. (Digital)
15. Press the TV/AV button on the remote control to set to the DIGITAL mode.Then perform the above adjustments 2~5.

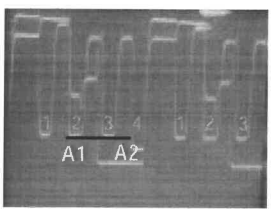


Fig. 2-1

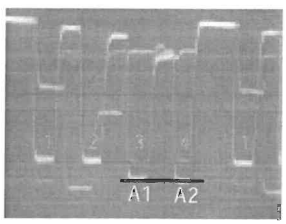


Fig. 2-2

2-7: COLOR CENT

1. Provide a color bar pattern with the generator. (RF Input)
2. Using the remote control, set the brightness, contrast, color and tint to normal position.
3. Connect the oscilloscope to **TP022** .
4. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(35)** on the remote control to select "COL.CENT".
5. Adjust the VOLTS RANGE VARIABLE knob of the oscilloscope until the range between white 100% and 0% is set to 5 scales on the screen of the oscilloscope.
6. Press the VOL. UP/DOWN button on the remote control until the red color level is adjusted to 105 ± 5% of the white level. **(Refer to Fig. 2-3)**
7. Provide a video color bar pattern. (Audio Video Input)
8. Press the button on the remote control to set to the AV mode. Then perform the above adjustments 2~6.
9. Provide a color bar pattern. (YUV)
10. Press the TV/AV button on the remote control to set to the YUV mode.Then perform the above adjustments 2~6.
11. Provide a Digital (ATSC) color bar pattern.
12. Press the TV/AV button on the remote control to set to the DIGITAL mode.
13. Using the remote control, set the brightness, contrast, color and tint to normal position.
14. Connect the oscilloscope to **TP022** .
15. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(35)** on the remote control to select "COL.CENT".
16. Adjust the VOLTS RANGE VARIABLE knob of the oscilloscope until the range between white 100% and 0% is set to 5 scales on the screen of the oscilloscope.
17. Press the VOL. UP/DOWN button on the remote control until the red color level is adjusted to 95 ± 5% of the white level. **(Refer to Fig. 2-4)**

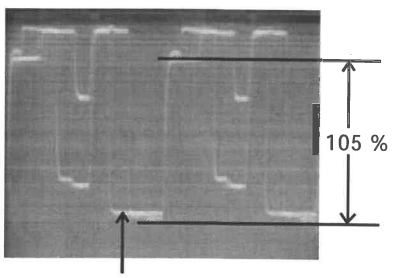


Fig. 2-3

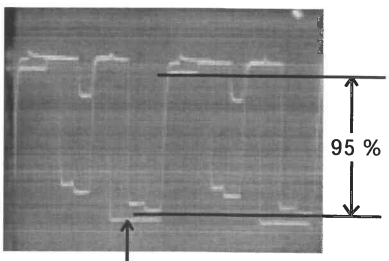


Fig. 2-4

ELECTRICAL ADJUSTMENTS

2-8: OSD POSITION

1. Provide a monoscope pattern from the Pattern Generator.
2. Using the remote control, set the brightness and contrast to normal position.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(00)** on the remote control to select "OSD H".
4. Press the VOL. UP/DOWN button on the remote control until the difference of A and B becomes minimum.
   (Refer to Fig. 2-5)

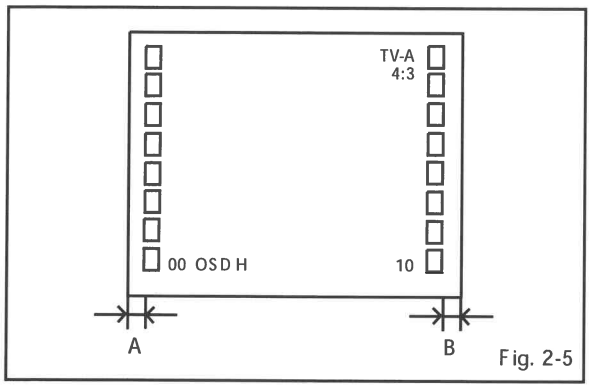


Fig. 2-5

2-9: HORIZONTAL POSITION

1. Provide a Analog monoscope pattern with a generator.
2. Using the remote control, set the brightness and contrast to normal position.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(03)** on the remote control to select "H.POSI".
4. Press the VOL. UP/DOWN button on the remote control until the SHIFT quantity of the OVER SCAN on right and left becomes minimum.
5. Provide a Digital (ATSC) monoscope pattern.
6. Press the TV/AV button on the remote control to set to the DIGITAL mode.Then perform the above adjustments 2~4.

2-10: HORIZONTAL SIZE

1. Provide a monoscope pattern with the pattern generator.
2. Using the remote control, set the brightness and contrast to normal position.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(43)** on the remote control to select "H.SIZE".
4. Press the VOL. UP/DOWN button on the remote control until the SHIFT quantity of the OVER SCAN on the right and left becomes 10± 3%.

2-11: VERTICAL LINEARITY

1. Provide a monoscope pattern with the generator.
2. Using the remote control, set the brightness, contrast, to normal position.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(08)** on the remote control to select "V.LIN".
4. Press the VOL. UP/DOWN button on the remote control until the SHIFT quantity of the OVER SCAN on upside and downside becomes minimum.

2-12: VERTICAL POSITION

1. Provide a monoscope pattern with the pattern generator.
2. Using the remote control, set the brightness and contrast to normal position.
3. Adjust the **VR401** until the horizontal line becomes fit to the notch of the shadow mask.
   (Refer to Fig. 2-6)

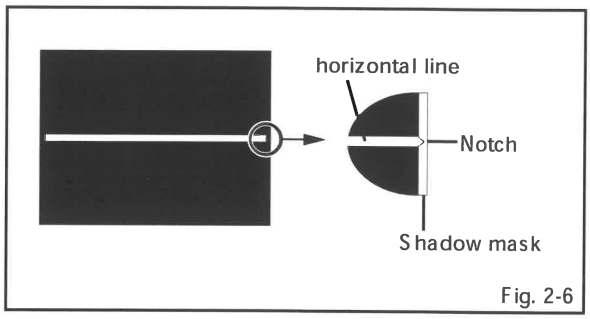


Fig. 2-6

2-13: VERTICAL SIZE

1. Provide a monoscope pattern with the generator.
2. Using the remote control, set the brightness and contrast to normal position.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(06)** on the remote control to select "V. SIZE".
4. Press the VOL. UP/DOWN button on the remote control until the SHIFT quantity of the OVER SCAN on upside and downside becomes 9± 2%.

2-14: PARABOLA

1. Provide a crosshatch pattern with a pattern generator.
2. Using the remote control, set the brightness and contrast to normal position.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(44)** on the remote control to select "PARABOLA".
4. Press the VOL. UP/DOWN button on the remote control, so that the line becomes straight from the outside of the right and left.

2-15: TRAPEZIUM

1. Provide a crosshatch signal from the Pattern Generator.
2. Using the remote control, set the brightness and contrast to normal position.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(45)** on the remote control to select "TRAPEZIUM".
4. Press the VOL. UP/DOWN button on the remote control until both ends of the right and left vertical lines of the 4th length lines screen become parallel.

ELECTRICAL ADJUSTMENTS

2-16: CORT OP/BTM

1. Provide a crosshatch signal from the Pattern Generator .
2. Set the screen mode to FULL.
3. Using the remote control, set the brightness and contrast to normal position.
4. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(46)** on the remote control to select "COR.TOP".
5. Press the VOL. UP/DOWN button on the remote control until both ends of the vertical lines become parallel.
6. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(47)** on the remote control to select "COR. BTM".
7. Press the VOL. UP/DOWN button on the remote control until both ends of the vertical lines of the screen become parallel.

2-17: BRIGHT CENT

1. Provide a monoscope pattern. (RF Input)
2. Set the screen mode to FULL.
3. Using the remote control, set the brightness and contrast to normal position.
4. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(29)** on the remote control to select "BRI. CENT".
5. Press the VOL. UP/DOWN button on the remote control until the white 10% is starting to be visible
6. Provide a monoscope pattern. (Audio Video Input)
7. Press the TV/AV button on the remote control to set to the AV mode. Then perform the above adjustments 2~5.
8. Provide a monoscope pattern. (YUV)
9. Press the TV/AV button on the remote control to set to the YUV mode.Then perform the above adjustments 2~5.

2-18: CONTRAST MAX

1. Provide a color bar pattern. (RF Input)
2. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(33)** on the remote control to select "CONT.MAX".
3. Press the VOL. UP/DOWN button on the remote control until the contrast step No. becomes "95".
4. Receive a broadcast and check if the picture is normal.
5. Provide a color bar pattern. (Audio Video Input)
6. Press the TV/AV button on the remote control to set to the AV mode. Then perform the above adjustments 2~4.
7. Provide a monoscope pattern. (YUV)
8. Press the TV/AV button on the remote control to set to the YUV mode.Then perform the above adjustments 2~4.

2-19: Confirmation of Fixed Value (Step No.)

Please check if the fixed values of each adjustment item is set correctly referring below.

NO.	FUNCTION	RF	AV	CS	DIGITAL
01	OSD C	01	01	01	01
04	H BLK L	02	02	02	02
05	H BLK R	00	00	00	00
07	V.POSI	01	01	01	01
09	VS CORR	14	14	14	14
10	V COMP	03	03	03	03
30	BRI.MAX	65	65	65	65
31	BRI.MIN	10	10	10	10
32	CONT.CENT	55	55	55	50
34	CONT.MIN	10	10	10	10
36	COL.MAX	127	127	127	127
37	COL.MIN	00	00	00	00
39	SHARP.CENT	27	27	27	27
40	SHARP.MAX	63	63	63	63
41	SHARP.MIN	05	05	05	05
42	SUB BIAS	00	00	00	00
48	TEST STEREO	00	00	00	00

ELECTRICAL ADJUSTMENTS

3. PURITY AND CONVERGENCE ADJUSTMENTS

NOTE

1. Turn the unit on and let it warm up for at least 30 minutes before performing the following adjustments.
2. Place the CRT surface facing east or west to reduce the terrestrial magnetism.
3. Turn ON the unit and demagnetize with a Degauss Coil.

3-1: STATIC CONVERGENCE (ROUGH ADJUSTMENT)

1. Tighten the screw for the magnet. Refer to the adjusted CRT for the position. **(Refer to Fig. 3-1)**
   If the deflection yoke and magnet are in one body, untighten the screw for the body.
2. Provide a green raster pattern from the color bar generator.
3. Slide the deflection yoke until it touches the funnel side of the CRT.
4. Adjust center of screen to green, with red and blue on the sides, using the pair of purity magnets.
5. Switch the color bar generator from the green raster pattern to the crosshatch pattern.
6. Combine red and blue of the 3 color crosshatch pattern on the center of the screen by adjusting the pair of 4 pole magnets.
7. Combine red/blue (magenta) and green by adjusting the pair of 6 pole magnets.
8. Adjust the crosshatch pattern to change to white by repeating steps 6 and 7.

NOTE

Adjust after performing adjustments in section 3-1.

1. Provide a green raster pattern from color bar generator.
2. Adjust the pair of purity magnets to center the color on the screen.
   Adjust the pair of purity magnets so the color at the ends are equally wide.
3. Move the deflection yoke backward (to neck side) slowly, and stop it at the position when the whole screen is green.
4. Confirm red and blue colors.
5. Adjust the slant of the deflection yoke while watching the screen, then tighten the fixing screw.

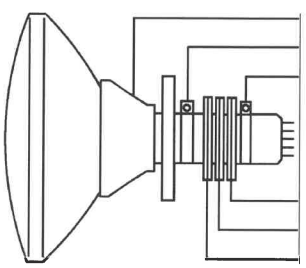


Fig. 3-1

3-3: STATIC CONVERGENCE

NOTE

Adjust after performing adjustments in section 3-2.

1. Provide a crosshatch pattern from the color bar generator.
2. Combine red and blue of the 3 color crosshatch pattern on the center of the screen by adjusting the pair of 4 pole magnets.
3. Combine red/blue (magenta) and green by adjusting the pair of 6 pole magnets.

3-4: DYNAMIC CONVERGENCE

NOTE

Adjust after performing adjustments in section 3-3.

1. Adjust the differences around the screen by moving the deflection yoke upward/downward and right/left. **(Refer to Fig. 3-2-a)**
2. Insert three wedges between the deflection yoke and
   CRT funnel to fix the deflection yoke. **(Refer to Fig. 3-2-b)**

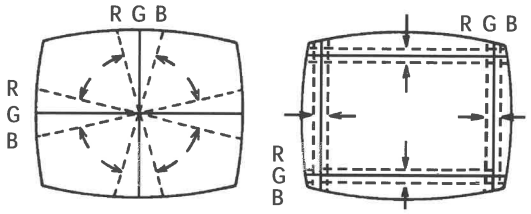


Fig. 3-2-a

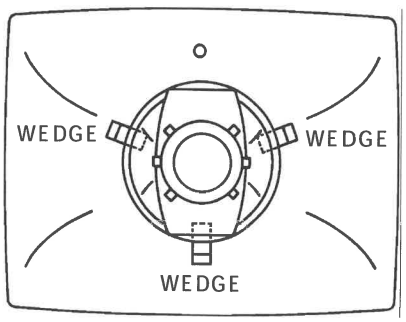


Fig. 3-2-b

27F554T Voltage Charts

IC001

Pins	Standby	Run
1	0	4.9
2	4.7	4.9
3	4.7	4.9
4	0	0
5	0.2	3.3
6	0	2.5
7	0	0.8

IC005

Pins	Standby	Run
1	5.1	3
2	3.4	4.4
3	0	0.3
4	0	0
5	0.7	0
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
11	0	0
12	3.4	4.4
13	5.1	3
14	5.1	4.4
15	5.1	4.4
16	5.1	5.1

IC102

Pins	Standby	Run
1	5.1	5.1
2	5.1	5.1
3	0	0
4	0	0
5	0	0

IC199

Pins	Standby	Run
1	0	0
2	0	0
3	0	0
4	0	0
5	5.1	3
6	5.1	3
7	0	0
8	5.1	4.9

IC201

Pins	Standby	Run
1	0	2.2
2	0	2.3
3	0	2
4	0.2	0
5	0	4.7
6	0	2.5
7	0	2.4
8	0	2.1
9	0	2.7
10	0	2.1
11	0	4
12	0	4
13	0	2.4
14	0	4.7
15	0	2.3
16	0	2.3
17	0	2.3
18	0	2.8
19	0	2.8
20	0	0
21	0	3
22	0	2.1
23	0	3
24	0	2.4

IC101

Pins	Standby	Run
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	1.2
8	0	2.3
9	5.1	5.1
10	5.1	5.1
11	0	0
12	0	0
13	0	0
14	5.1	5.1
15	0	0
16	0	0
17	0	0
18	0	0
19	0	0
20	0	0
21	0	5.1
22	0	0
23	0	5.1
24	0	0.2
25	0	0.2

Pins	Standby	Run
26	0	5.1
27	0	0
28	0	5.1
29	0	5.1
30	0	5.1
31	0.1	3.3
32	0	5.1
33	0.1	0
34	5.1	5.1
35	1.5	1.5
36	1.5	1.5
37	5.1	5.1
38	4.7	4.7
39	1	0.9
40	0	0
41	0	0
42	0	0
43	5.1	5.1
44	2.4	2.3
45	2.4	2.3
46	0	0
47	0	0
48	0	0
49	0	0
50	5.1	5.1

Pins	Standby	Run
51	0	0
52	0	0
53	5.1	5.1
54	0	2.4
55	2.6	1.7
56	1	1.5
57	0	0
58	0	4
59	0	4.7
60	0	0
61	0	5.1
62	0	0
63	0	0
64	0	0
65	0	0
66	0	0
67	0	0
68	0	5.1
69	0	0.2
70	0	5.1
71	5.1	3
72	5.1	3
73	0	0
74	0	0
75	0	0

Pins	Standby	Run
76	0	0
77	0	0
78	0	0
79	0	0
80	0	0
81	5.1	5.1
82	5.1	5.1
83	5.1	0
84	0	0
85	5.1	5.1
86	5.1	5.1
87	0	0
88	0	0
89	0	0
90	0	0
91	2.5	2.5
92	2.5	2.5
93	0.1	0.1
94	0.8	0.8
95	0.1	0.1
96	2.4	2.4
97	0.3	0.3
98	5.1	5.1
99	5.1	5.1
100	0	0

IC401

Pins	Standby	Run
1	0	0
2	0.4	14.9
3	1.4	25.9
4	0	2.5
5	0	2.5
6	0.1	25.9
7	0.1	2.4
8	0	2.3
9	0	2.3
10	0	11.3

IC502

Pins	Standby	Run
1	5.9	7.9
2	4.9	6.8
3	0.2	0.4
4	5.4	29.1

27F554T Voltage Charts

IC601

Pins	Standby	Run
1	0.2	2.4
2	5.1	5.1
3	0	2.5
4	5.8	5.7
5	0.1	0.1
6	8.6	8.5
7	0	2.4
8	0	3.4
9	0.1	2.4
10	0	2.3
11	0.3	8.4
12	0	1.8
13	0	7.7
14	0	1.8
15	0	1.8
16	0	1.8
17	0	0
18	0.1	2.1
19	0	2.1
20	0.1	2.4
21	0	5.1
22	0.2	2.5
23	0	0.8
24	0	0
25	0	0.8

Pins	Standby	Run
26	0	1.6
27	0	0
28	0	3.1
29	0	3
30	0	2.5
31	0	0
32	0	1.7
33	0	2.5
34	0.1	3.3
35	0	2.7
36	0	4.7
37	0	1.8
38	0	0.1
39	0.2	5.4
40	0	0
41	0	0
42	0.2	2.7
43	0	5
44	0	2.4
45	0	0.3
46	0	2.4
47	0	2.4
48	0	2.4
49	0	0
50	5.1	2.9

Pins	Standby	Run
51	5.1	2.9
52	0	0
53	0	4.7
54	0	0.5
55	0	0
56	0	0
57	0	0
58	0.1	0
59	0	0.1
60	0	4.7
61	0	0
62	0	1.8
63	0	2
64	0	0

IC602

Pins	Standby	Run
1	0	7.4
2	0	3
3	0	4
4	0	0
5	0	4
6	0	4
7	0	3
8	0.2	4.7
9	0.2	4.7
10	0	0
11	0	4.7
12	0	3
13	0	9.3
14	0	4.7
15	0	0
16	0	4.7

IC701

Pins	Standby	Run
1	0.1	4.6
2	0	4.8
3	0.1	4.6
4	0	4.8
5	0.1	4.7
6	0	3.8
7	0	4.6
8	0	4.8
9	0	4.6
10	0.1	0
11	0	4.7
12	0	4.7
13	0	4.6
14	0	9.3
15	0	0
16	0	0

IC901

Pins	Standby	Run
1	0	3.8
2	0	3.8
3	0.2	3.8
4	0.1	3.8
5	0	3.7
6	0	0
7	0.2	4.3
8	0	0.4
9	0.3	2.7
10	0	0.1
11	5.1	3
12	5.1	3
13	0	2.4
14	0	3.2
15	0	2
16	0.3	4
17	0.3	0
18	0.3	3.8
19	0	4
20	0.3	3.9
21	0.2	3.9
22	0	3.9
23	0	3.9
24	0	0.3
25	0	3.9

Pins	Standby	Run
26	0.1	3.9
27	0	3.9
28	0	3.8
29	0	3.8
30	0	1.2
31	0	9.1
32	0	1
33	0	0
34	0	2.4
35	0	6.2
36	0	6.2

IC1001

Pins	Standby	Run
1	5.8	6.3
2	0	2.2
3	0	0
4	0	2.2
5	0	3.5
6	0.9	1.4
7	0	0
8	0.9	1.4
9	0	0
10	0	2.2
11	0	0
12	0	2.2

CP001 Connector

Pins	Standby	Run
1	0	2.5
2	0	5.1
3	0	0
4	0	0
5	3.8	2.7
6	0	0
7	0.2	3.3
8	0.3	0.1
9	0.3	0.2
10	0.3	3.3
11	0.1	3.3
12	0	3.3
13	0	0.9
14	0	0
15	0	0
16	0	0.1
17	0.4	4.6
18	0.4	4.6
19	0.9	9.2
20	0	0
21	0	0
22	0	1.6
23	0	0
24	0	0
25	0	0

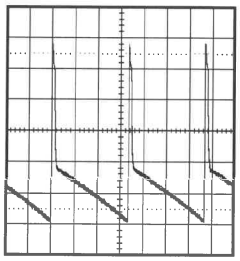
Pins	Standby	Run
26	0	0
27	0.2	3.2
28	3.3	4.4

WAVEFORMS

DEFLECTION

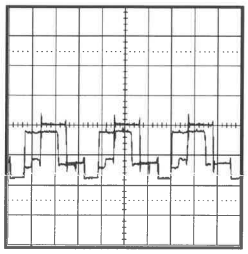
POWER ON
5ms
10.0V

(18)



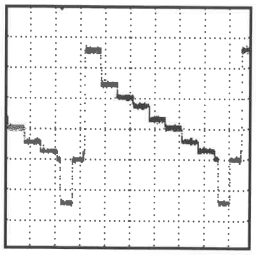
20µs
2V

(23)



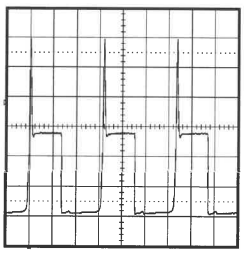
10µs
200mV

(28)



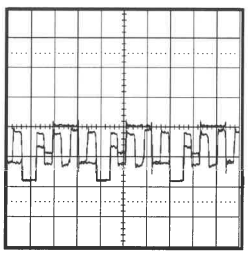
20µs
20V

(19)



20µs
2V

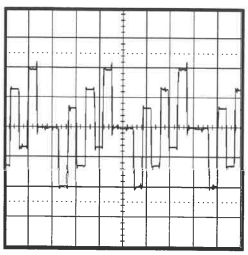
(24)



AV SWITCH/SOUND AMP

20µs
200mV

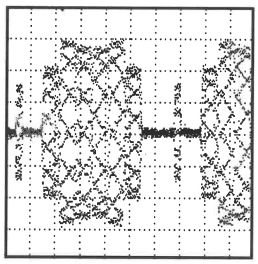
(29)



CHROMA

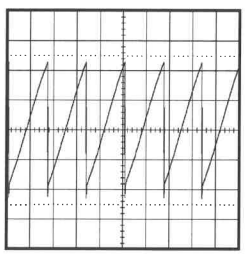
10µs
200mV

(20)



10ms
0.5V

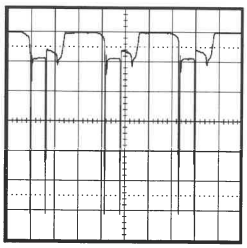
(25)



DEFLECTION

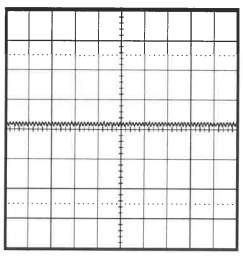
20µs
2V

(30)



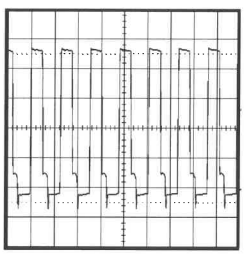
2µs
1V

(21)



50µs
1V

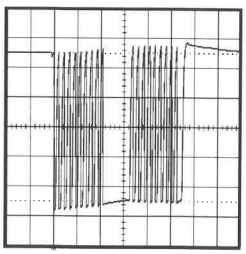
(26)



MICON

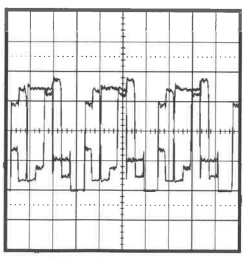
50µs
1V

(33)



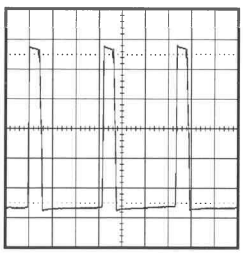
20µs
1V

(22)



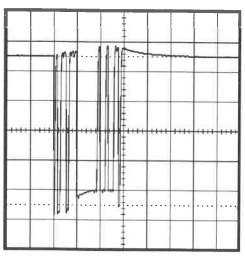
20µs
2V

(27)



0.1ms
1V

(34)



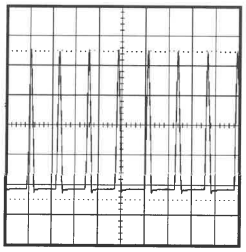
NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

WAVEFORMS

DEFLECTION

50µs
200V

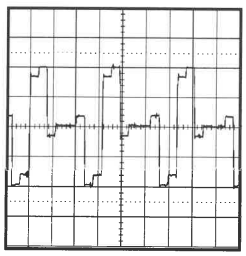
(35)



AV SWITCH/SOUND AMP

20µs
200mV

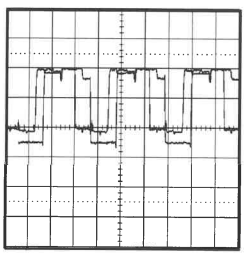
(36)



CRT

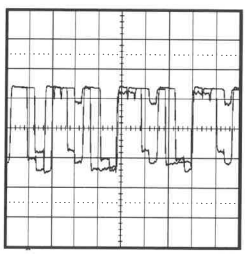
20µs
50V

(37)



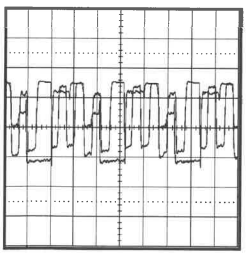
20µs
50V

(38)



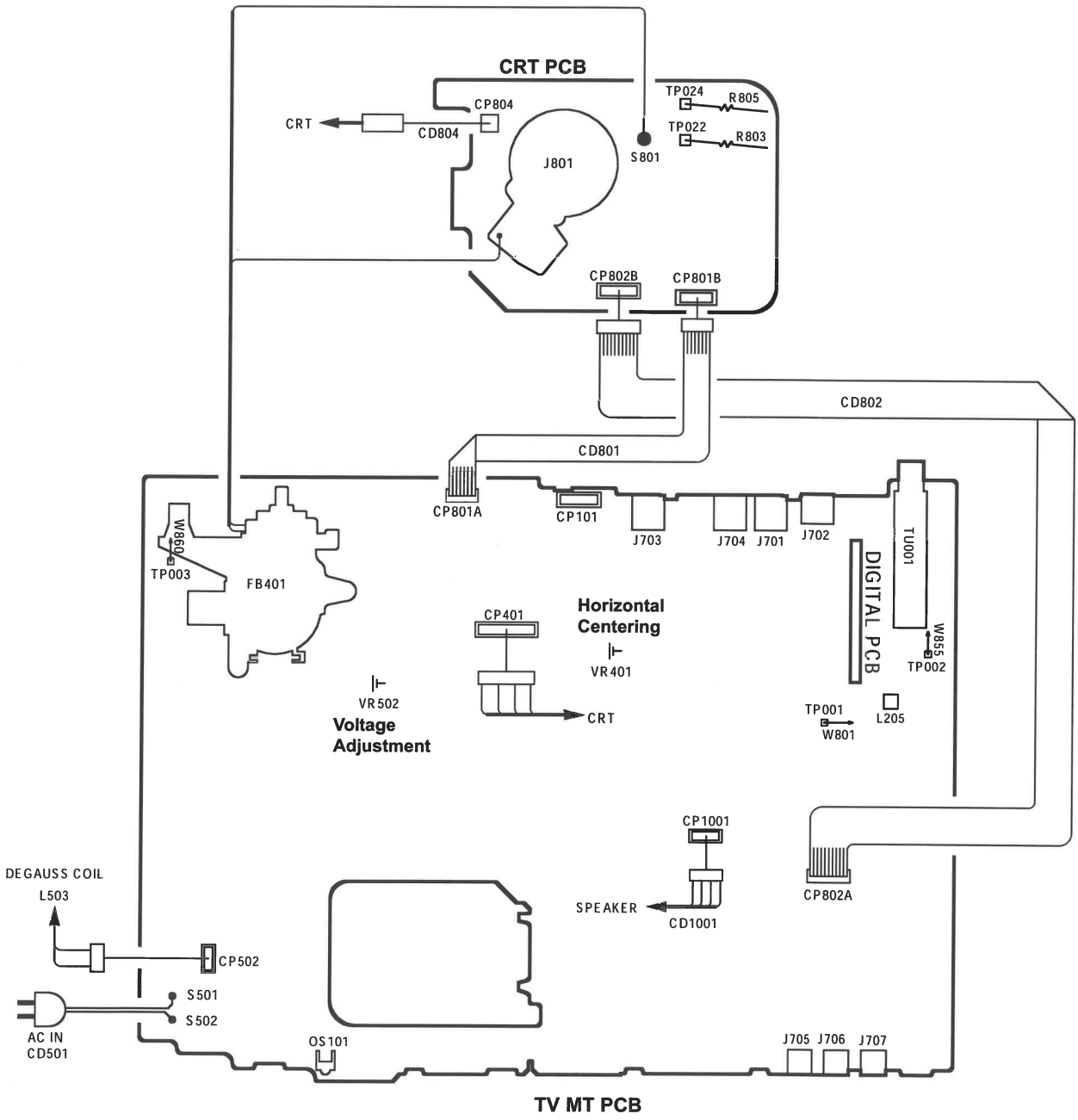
20µs
50V

(39)

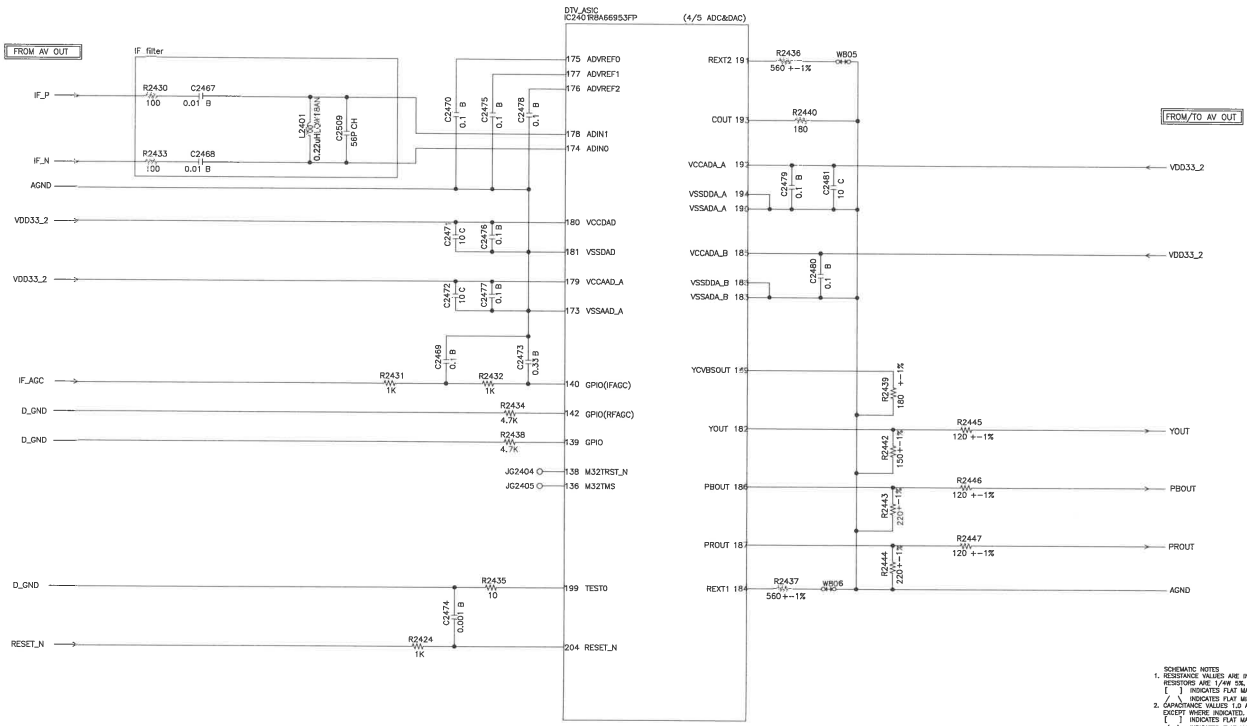


NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

27F554T WIRING DIAGRAM



ADC & DAC SCHEMATIC DIAGRAM



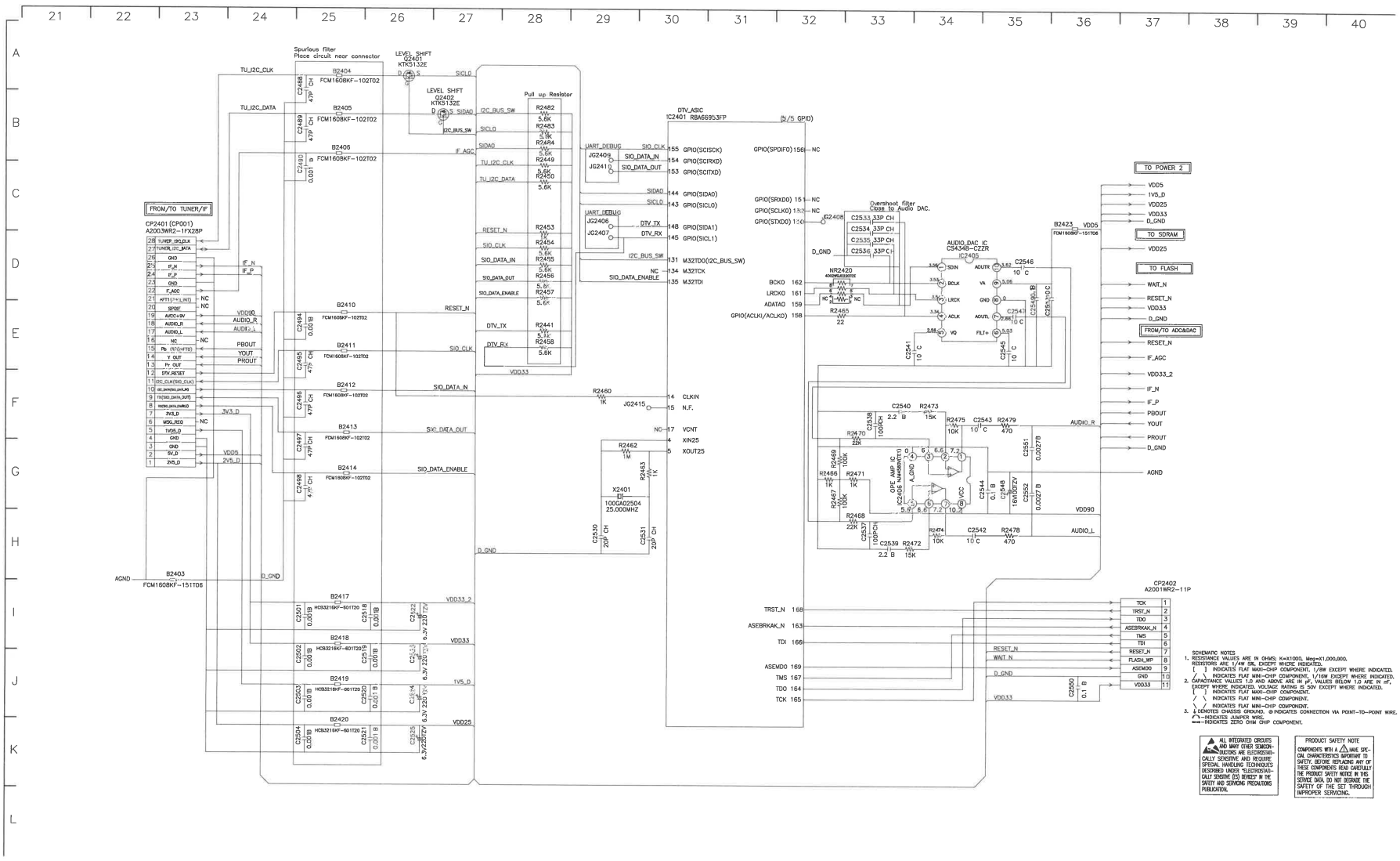
1. SCHEMATIC NOTES
2. RESISTANCE VALUES ARE IN OHMS; K=X1000, Meg=X1,000,000.
3. RESISTORS ARE 1/4W 5%, EXCEPT WHERE INDICATED.
4. [ ] INDICATES FLAT MAX-CHIP COMPONENT, 1/8W EXCEPT WHERE INDICATED.
5. / \ INDICATES FLAT MINI-CHIP COMPONENT, 1/16W EXCEPT WHERE INDICATED.
6. CAPACITANCE VALUES 1.0 AND ABOVE ARE IN uF, VALUES BELOW 1.0 ARE IN nF, EXCEPT WHERE INDICATED. VOLTAGE RATING IS 50V EXCEPT WHERE INDICATED.
7. [ ] INDICATES FLAT MAX-CHIP COMPONENT.
8. / \ INDICATES FLAT MINI-CHIP COMPONENT.
9. \ / INDICATES FLAT MINI-CHIP COMPONENT.
10. ⏚ DENOTES CHASSIS GROUND. ⊙ INDICATES CONNECTION VIA POINT-TO-POINT WIRE.
11. ∩ —INDICATES JUMPER WIRE.
12. —INDICATES ZERO OHM CHIP COMPONENT.

ALL INTEGRATED CIRCUITS AND MANY OTHER SEMICONDUCTORS ARE ELECTROSTATICALLY SENSITIVE AND REQUIRE SPECIAL HANDLING TECHNIQUES DESCRIBED UNDER "ELECTROSTATICALLY SENSITIVE (ES) DEVICES" IN THE SAFETY AND SERVICING PRECAUTIONS PUBLICATION.

PRODUCT SAFETY NOTE:
COMPONENTS WITH A ⚠ MARK SPECIAL CHARACTERISTICS IMPORTANT TO SAFETY. BEFORE REPLACING ANY OF THESE COMPONENTS READ CAREFULLY THE PRODUCT SAFETY NOTICE IN THIS SERVICE DATA. DO NOT DEGRADE THE SAFETY OF THE SET THROUGH IMPROPER SERVICING.

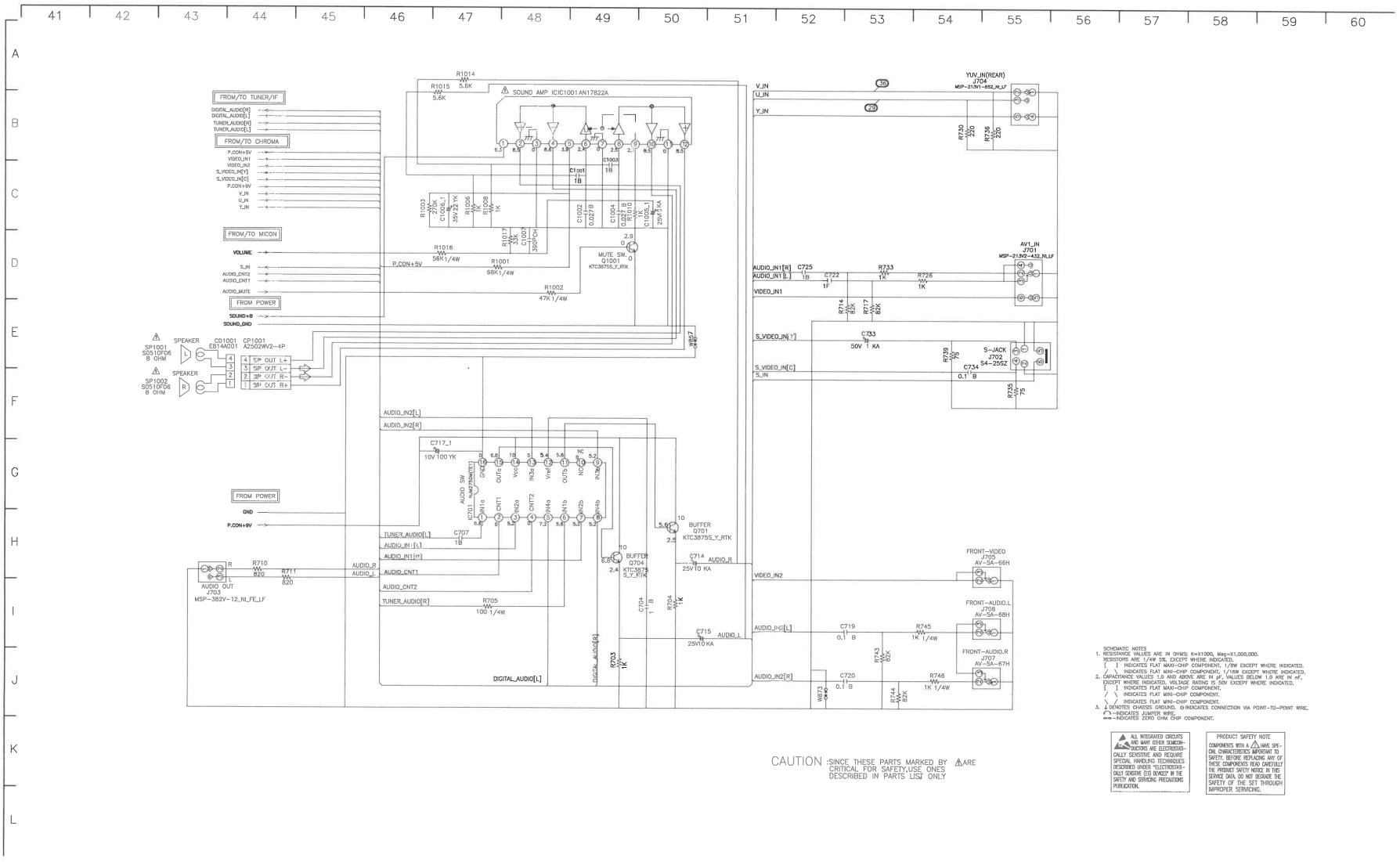
Page 9-1

AUDIO VIDEO PROCESSING SCHEMATIC DIAGRAM



Page 9-2

AV SWITCH/SOUND AMP SCHEMATIC DIAGRAM



CAUTION :SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY,USE ONES DESCRIBED IN PARTS LIST ONLY

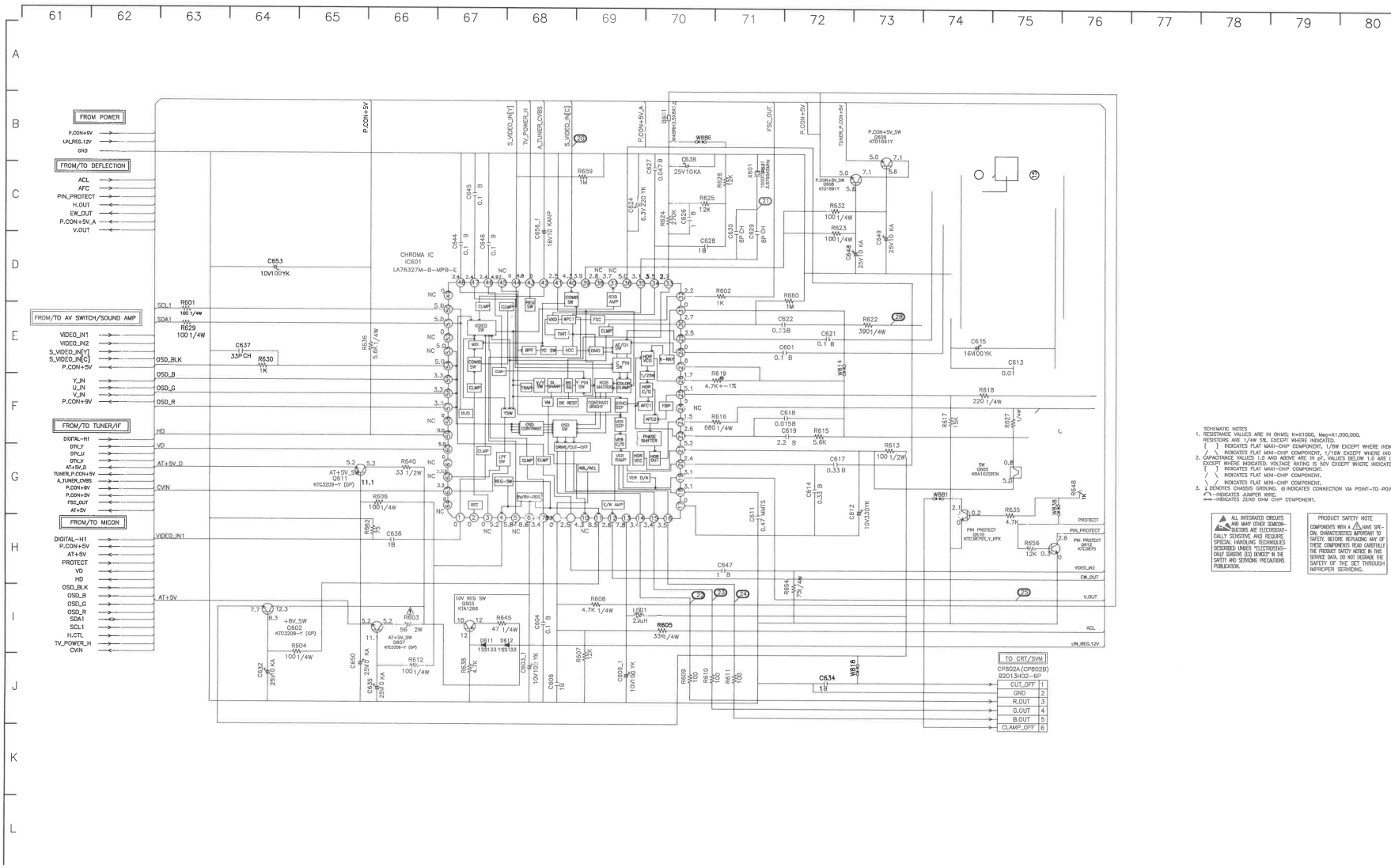
SCHEMATIC NOTES
1. RESISTANCE VALUES ARE IN OHMS; K=X1000, Meg=X1,000,000.
   RESISTORS ARE 1/4W 5%, EXCEPT WHERE INDICATED.
   [ ] INDICATES FLAT MAXI-CHIP COMPONENT, 1/2W EXCEPT WHERE INDICATED.
   / \ INDICATES FLAT MINI-CHIP COMPONENT, 1/16W EXCEPT WHERE INDICATED.
2. CAPACITANCE VALUES 1.0 AND ABOVE ARE IN μF, VALUES BELOW 1.0 ARE IN mF,
   EXCEPT WHERE INDICATED. VOLTAGE RATING IS 50V EXCEPT WHERE INDICATED.
   [ ] INDICATES FLAT MAXI-CHIP COMPONENT.
   / \ INDICATES FLAT MINI-CHIP COMPONENT.
3. ⏚ DENOTES CHASSIS GROUND. ⊖ INDICATES CONNECTION VIA POINT-TO-POINT WIRE.
   ⌒ INDICATES JUMPER WIRE.
   ▬ INDICATES ZERO OHM CHIP COMPONENT.

⚠ ALL INTEGRATED CIRCUITS AND MANY OTHER SEMICONDUCTORS ARE ELECTROSTATICALLY SENSITIVE AND REQUIRE SPECIAL HANDLING TECHNIQUES DESCRIBED UNDER "ELECTROSTATICALLY SENSITIVE (ES) DEVICES" IN THE SAFETY AND SERVICING PRECAUTIONS PUBLICATION.

PRODUCT SAFETY NOTE
COMPONENTS WITH A ⚠ HAVE SPECIAL CHARACTERISTICS IMPORTANT TO SAFETY. BEFORE REPLACING ANY OF THESE COMPONENTS READ CAREFULLY THE PRODUCT SAFETY NOTICE IN THIS SERVICE DATA. DO NOT DEGRADE THE SAFETY OF THE SET THROUGH IMPROPER SERVICING.

Page 9-3

CHROMA SCHEMATIC DIAGRAM



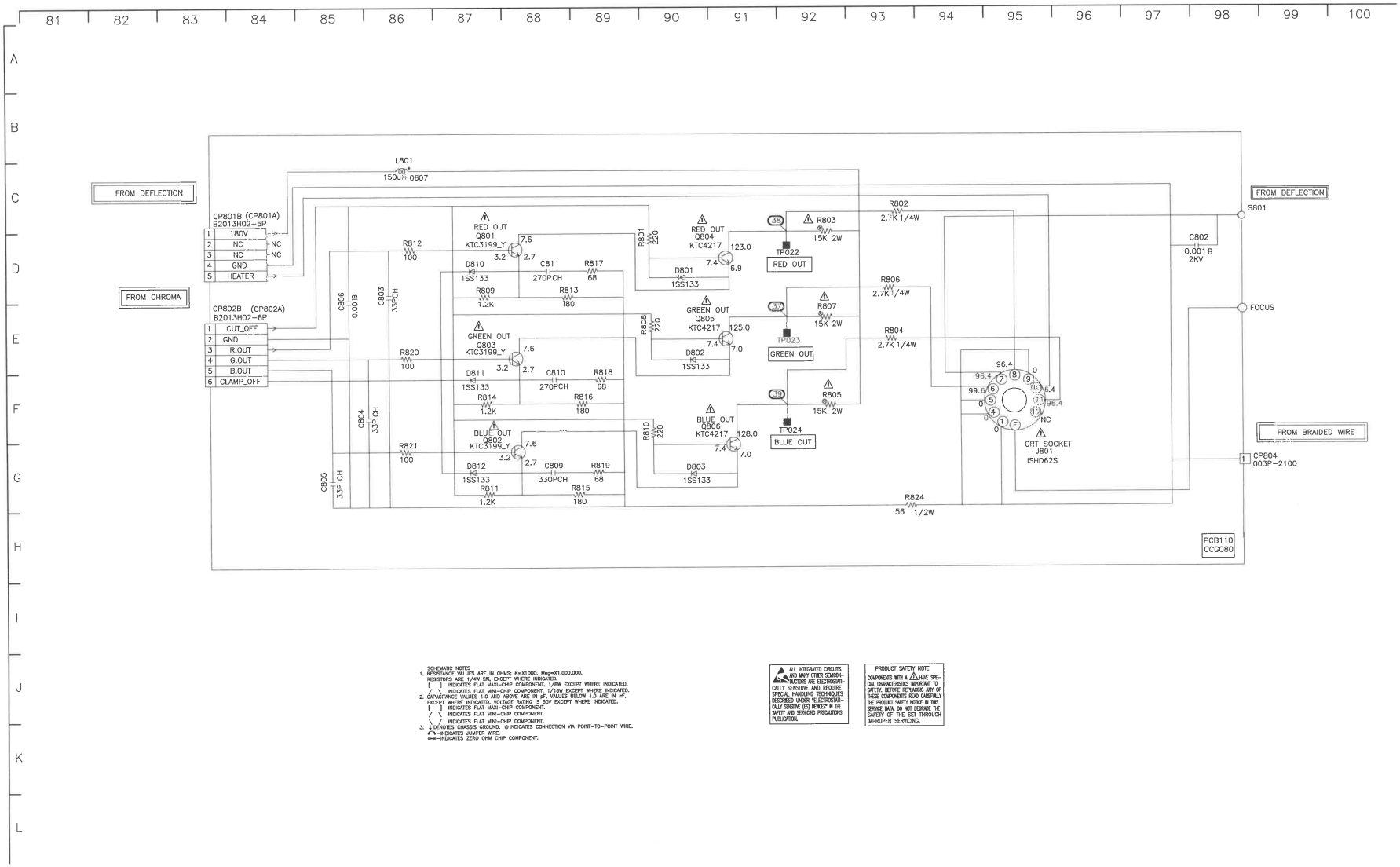
SCHEMATIC NOTES
1. RESISTANCE VALUES ARE IN OHMS; K=X1000, Meg=X1,000,000.
RESISTORS ARE 1/4W 5%, EXCEPT WHERE INDICATED.
[ ] INDICATES FLAT MAXI-CHIP COMPONENT, 1/8W EXCEPT WHERE INDICATED.
/ \ INDICATES FLAT MINI-CHIP COMPONENT, 1/10W EXCEPT WHERE INDICATED.
2. CAPACITANCE VALUES 1.0 AND ABOVE ARE IN pF, VALUES BELOW 1.0 ARE IN mF.
EXCEPT WHERE INDICATED. VOLTAGE RATING IS 50V EXCEPT WHERE INDICATED.
[ ] INDICATES FLAT MAXI-CHIP COMPONENT.
/ \ INDICATES FLAT MINI-CHIP COMPONENT.
/ \ INDICATES FLAT MINI-CHIP COMPONENT.
3. ⏚ DENOTES CHASSIS GROUND. ⊕ INDICATES CONNECTION VIA POINT-TO-POINT WIRE.
⌒ -INDICATES JUMPER WIRE.
⟷ -INDICATES ZERO OHM CHIP COMPONENT.

⚠ ALL INTEGRATED CIRCUITS AND MANY OTHER SEMICONDUCTORS ARE ELECTROSTATICALLY SENSITIVE AND REQUIRE SPECIAL HANDLING TECHNIQUES DESCRIBED UNDER "ELECTROSTATICALLY SENSITIVE (ES) DEVICES" IN THE SAFETY AND SERVICING PRECAUTIONS PUBLICATION.

PRODUCT SAFETY NOTE
COMPONENTS WITH A ⚠ HAVE SPECIAL CHARACTERISTICS IMPORTANT TO SAFETY. BEFORE REPLACING ANY OF THESE COMPONENTS READ CAREFULLY THE PRODUCT SAFETY NOTICE IN THIS SERVICE DATA. DO NOT DEGRADE THE SAFETY OF THE SET THROUGH IMPROPER SERVICING.

Page 9-4

CRT BOARD SCHEMATIC DIAGRAM



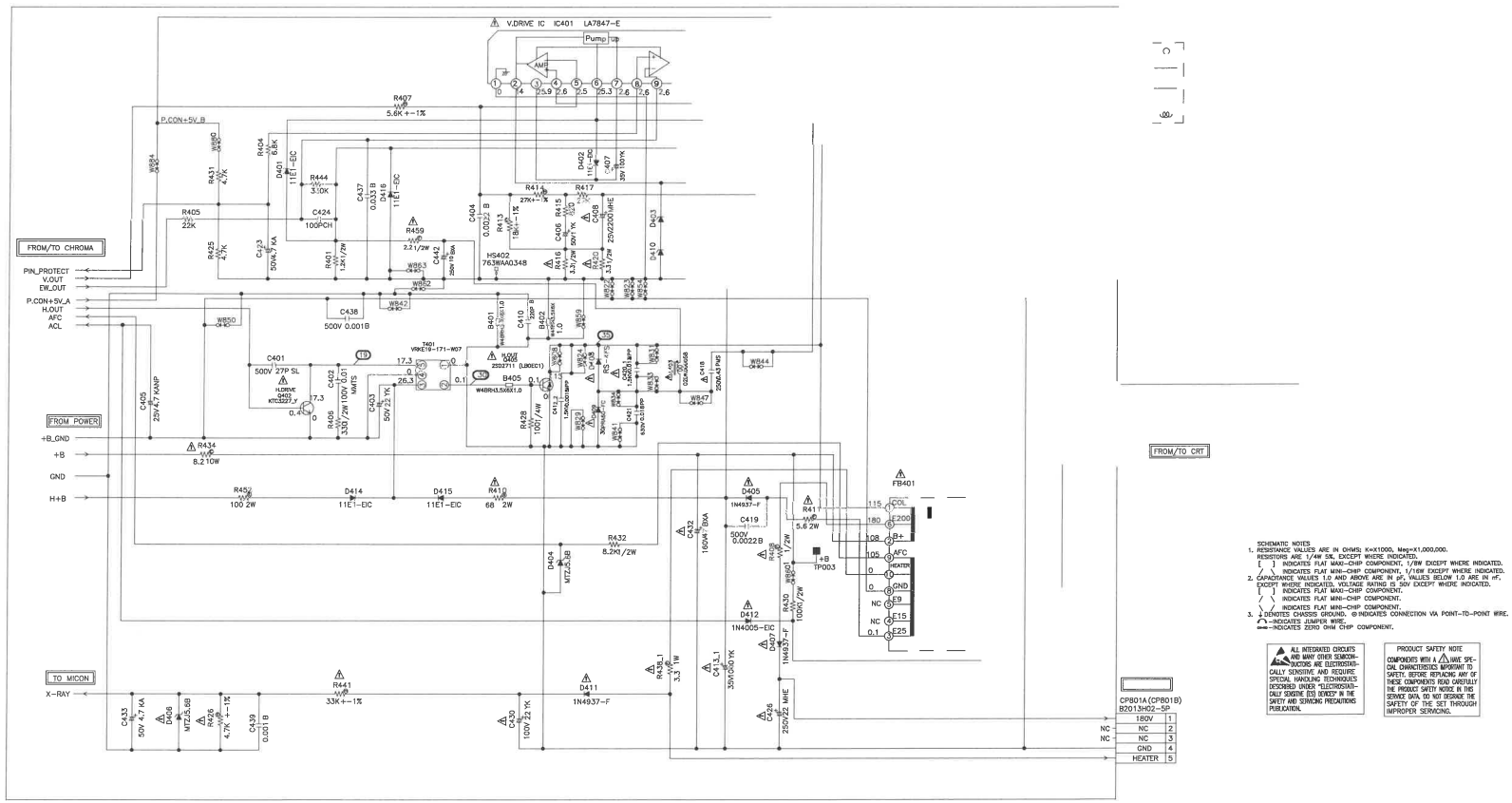
SCHEMATIC NOTES
1. RESISTANCE VALUES ARE IN OHMS; K=X1000, Meg=X1,000,000.
   RESISTORS ARE 1/4W 5%, EXCEPT WHERE INDICATED.
   [ ] INDICATES FLAT MAXI-CHIP COMPONENT, 1/8W EXCEPT WHERE INDICATED.
   / \ INDICATES FLAT MINI-CHIP COMPONENT, 1/10W EXCEPT WHERE INDICATED.
2. CAPACITANCE VALUES 1.0 AND ABOVE ARE IN pF. VALUES BELOW 1.0 ARE IN mF.
   EXCEPT WHERE INDICATED. VOLTAGE RATING IS 50V EXCEPT WHERE INDICATED.
   [ ] INDICATES FLAT MAXI-CHIP COMPONENT.
   / \ INDICATES FLAT MINI-CHIP COMPONENT.
   \ / INDICATES FLAT MINI-CHIP COMPONENT.
3. ⏚ DENOTES CHASSIS GROUND. ⊗ INDICATES CONNECTION VIA POINT-TO-POINT WIRE.
   ⌒ INDICATES JUMPER WIRE.
   ⟿ INDICATES ZERO OHM CHIP COMPONENT.

⚠ ALL INTEGRATED CIRCUITS AND MANY OTHER SEMICONDUCTORS ARE ELECTROSTATICALLY SENSITIVE AND REQUIRE SPECIAL HANDLING TECHNIQUES. DESCRIBED UNDER "ELECTROSTATICALLY SENSITIVE (ES) DEVICES" IN THE SAFETY AND SERVICING PRECAUTIONS PUBLICATION.

PRODUCT SAFETY NOTE
COMPONENTS WITH A ⚠ MARK SPECIAL CHARACTERISTICS IMPORTANT TO SAFETY. BEFORE REPLACING ANY OF THESE COMPONENTS READ CAREFULLY THE PRODUCT SAFETY NOTICE IN THIS SERVICE DATA. DO NOT DEGRADE THE SAFETY OF THE SET THROUGH IMPROPER SERVICING.

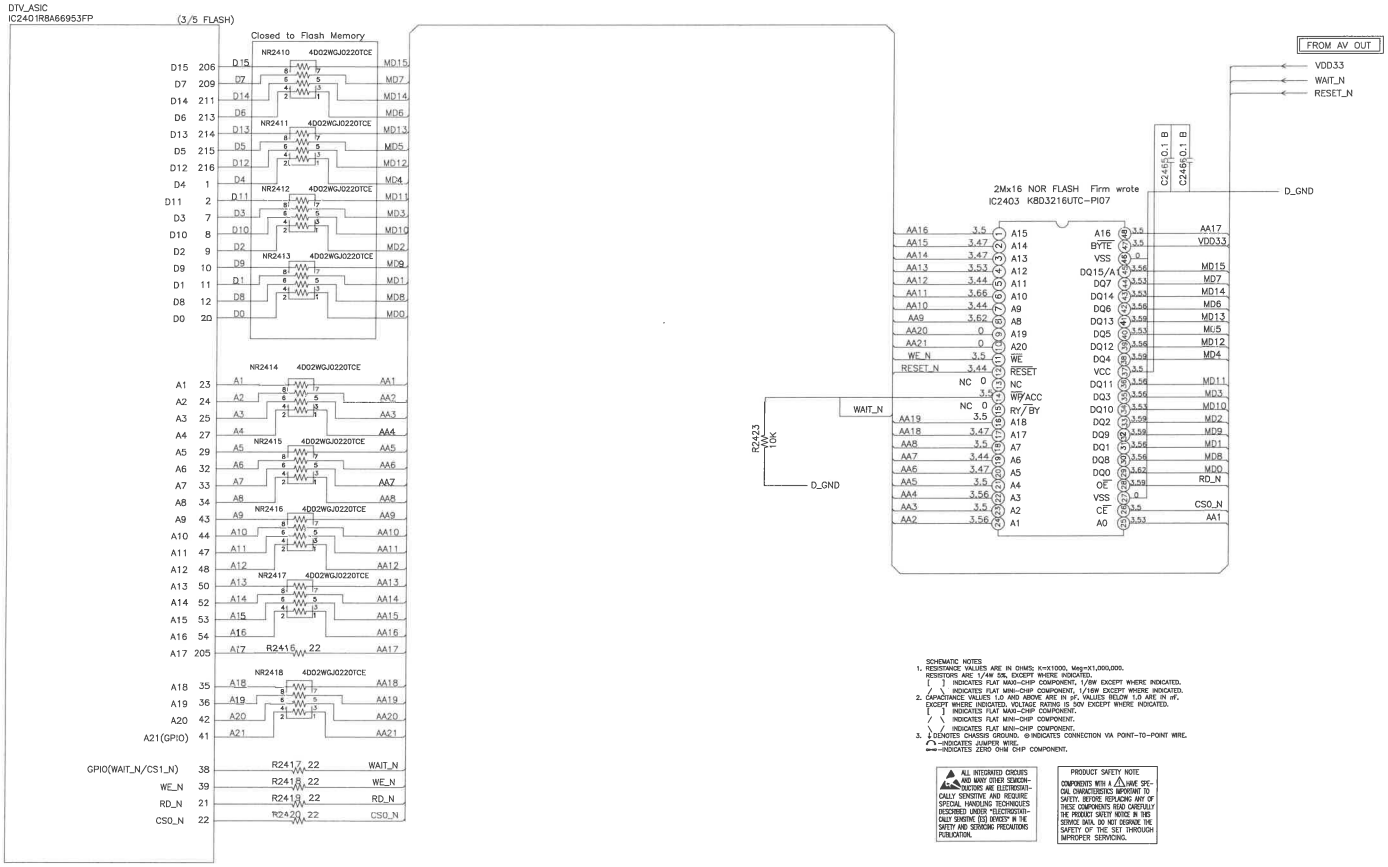
Page 9-5

DEFLECTION SCHEMATIC DIAGRAM



Page 9-6

FLASH SCHEMATIC DIAGRAM



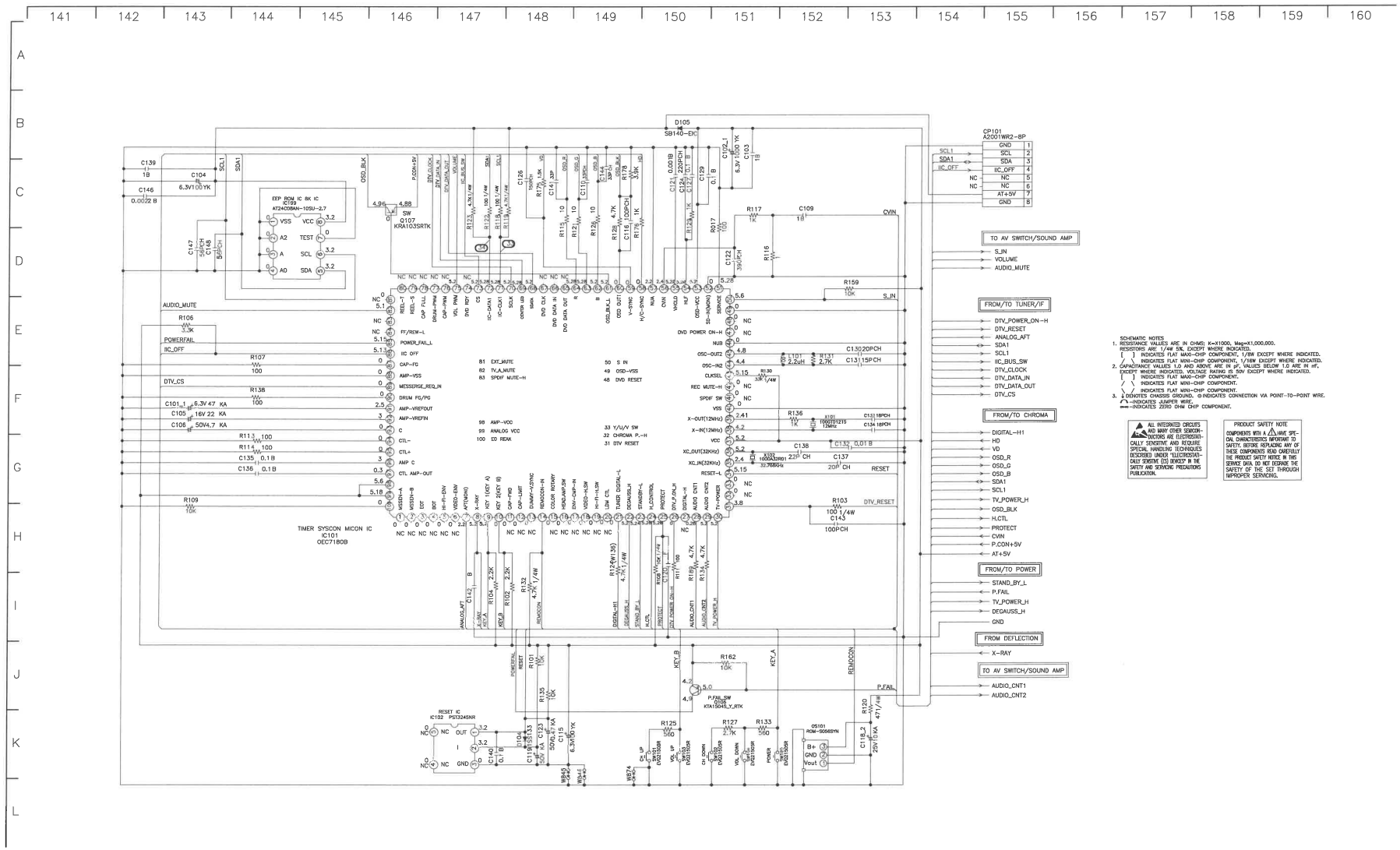
SCHEMATIC NOTES
1. RESISTANCE VALUES ARE IN OHMS; K=X1000, Meg=X1,000,000.
RESISTORS ARE 1/4W 5%, EXCEPT WHERE INDICATED.
[ ] INDICATES FLAT MAXI-CHIP COMPONENT, 1/8W EXCEPT WHERE INDICATED.
/ \ INDICATES FLAT MINI-CHIP COMPONENT, 1/16W EXCEPT WHERE INDICATED.
2. CAPACITANCE VALUES 1.0 AND ABOVE ARE IN uF. VALUES BELOW 1.0 ARE IN nF.
EXCEPT WHERE INDICATED, VOLTAGE RATING IS 50V EXCEPT WHERE INDICATED.
[ ] INDICATES FLAT MAXI-CHIP COMPONENT.
/ \ INDICATES FLAT MINI-CHIP COMPONENT.
\ / INDICATES FLAT MINI-CHIP COMPONENT.
3. ⏚ DENOTES CHASSIS GROUND. ⊕ INDICATES CONNECTION VIA POINT-TO-POINT WIRE.
⌒ =INDICATES JUMPER WIRE.
▬ =INDICATES ZERO OHM CHIP COMPONENT.

ALL INTEGRATED CIRCUITS AND MANY OTHER SEMICONDUCTORS ARE ELECTROSTATICALLY SENSITIVE AND REQUIRE SPECIAL HANDLING TECHNIQUES DESCRIBED UNDER "ELECTROSTATICALLY SENSITIVE (ES) DEVICES" IN THE SAFETY AND SERVICING PRECAUTIONS PUBLICATION.

PRODUCT SAFETY NOTE
COMPONENTS WITH A ⚠ HAVE SPECIAL CHARACTERISTICS IMPORTANT TO SAFETY. BEFORE REPLACING ANY OF THESE COMPONENTS READ CAREFULLY THE PRODUCT SAFETY NOTICE IN THIS SERVICE DATA. DO NOT DEGRADE THE SAFETY OF THE SET THROUGH IMPROPER SERVICING.

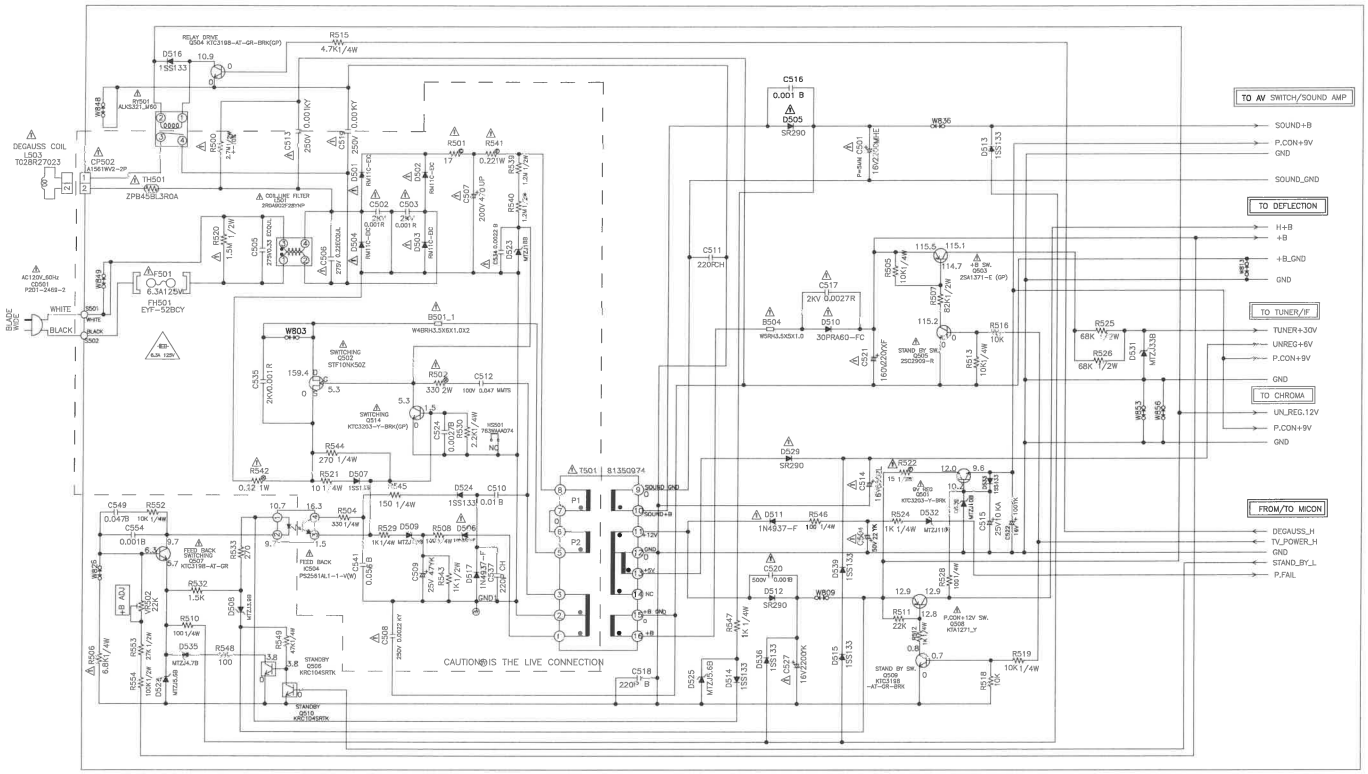
Page 9-7

MICROPROCESSOR SCHEMATIC DIAGRAM



Page 9-8

POWER SCHEMATIC DIAGRAM (PART 1 OF 2)



SCHEMATIC NOTES
1. RESISTANCE VALUES ARE IN OHMS: K=X1000, Meg=X1,000,000.
   RESISTORS ARE 1/4W 5%, EXCEPT WHERE INDICATED.
   [ ] INDICATES FLAT MAXI-CHIP COMPONENT, 1/8W EXCEPT WHERE INDICATED.
   / \ INDICATES FLAT MINI-CHIP COMPONENT, 1/16W EXCEPT WHERE INDICATED.
2. CAPACITANCE VALUES 1.0 AND ABOVE ARE IN uF, VALUES BELOW 1.0 ARE IN nF,
   EXCEPT WHERE INDICATED. VOLTAGE RATING IS 50V EXCEPT WHERE INDICATED.
   [ ] INDICATES FLAT MAXI-CHIP COMPONENT.
   / \ INDICATES FLAT MINI-CHIP COMPONENT.
   \ / INDICATES FLAT MINI-CHIP COMPONENT.
3. ⏚ DENOTES CHASSIS GROUND. ⊕ INDICATES CONNECTION VIA POINT-TO-POINT WIRE.
   ⌒ INDICATES JUMPER WIRE.
   0Ω INDICATES ZERO OHM CHIP COMPONENT.

⚠ ALL INTEGRATED CIRCUITS AND MANY OTHER SEMICONDUCTORS ARE ELECTROSTATICALLY SENSITIVE AND REQUIRE SPECIAL HANDLING TECHNIQUES DESCRIBED UNDER "ELECTROSTATICALLY SENSITIVE (ES) DEVICES" IN THE SAFETY AND SERVICING PRECAUTIONS PUBLICATION.

PRODUCT SAFETY NOTE: COMPONENTS WITH A ⚠ HAVE SPECIAL CHARACTERISTICS IMPORTANT TO SAFETY. BEFORE REPLACING ANY OF THESE COMPONENTS READ CAREFULLY THE PRODUCT SAFETY NOTICE IN THIS SERVICE DATA. DO NOT DEGRADE THE SAFETY OF THE SET THROUGH IMPROPER SERVICING.

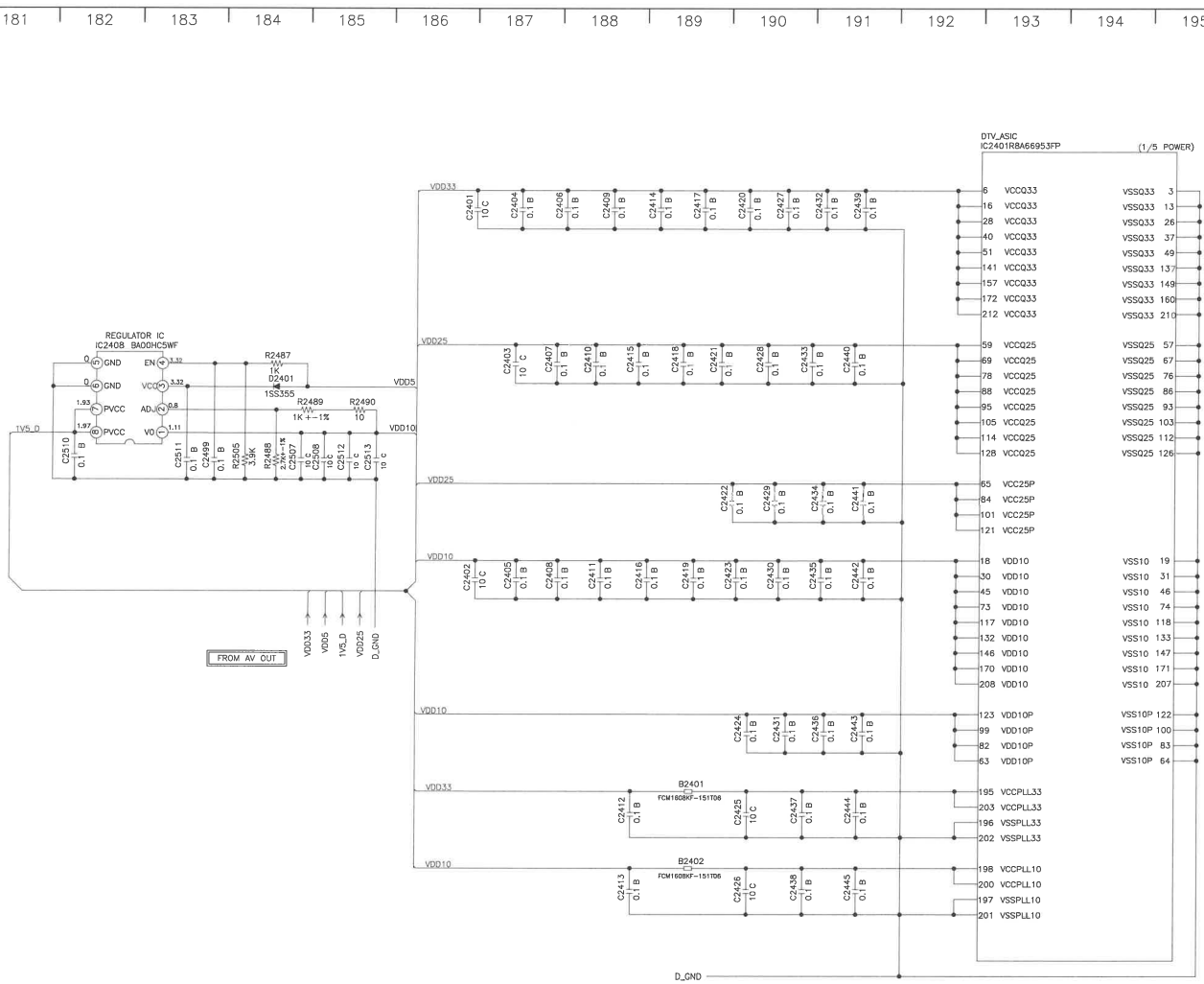
⚠ 6.3A 125V

CAUTION :FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH THE SAME TYPE FUSE 6.3A 125V(F501)

CAUTION :SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY,USE ONES DESCRIBED IN PARTS LIST ONLY.

Page 9-9

POWER SCHEMATIC DIAGRAM (PART 2 OF 2)



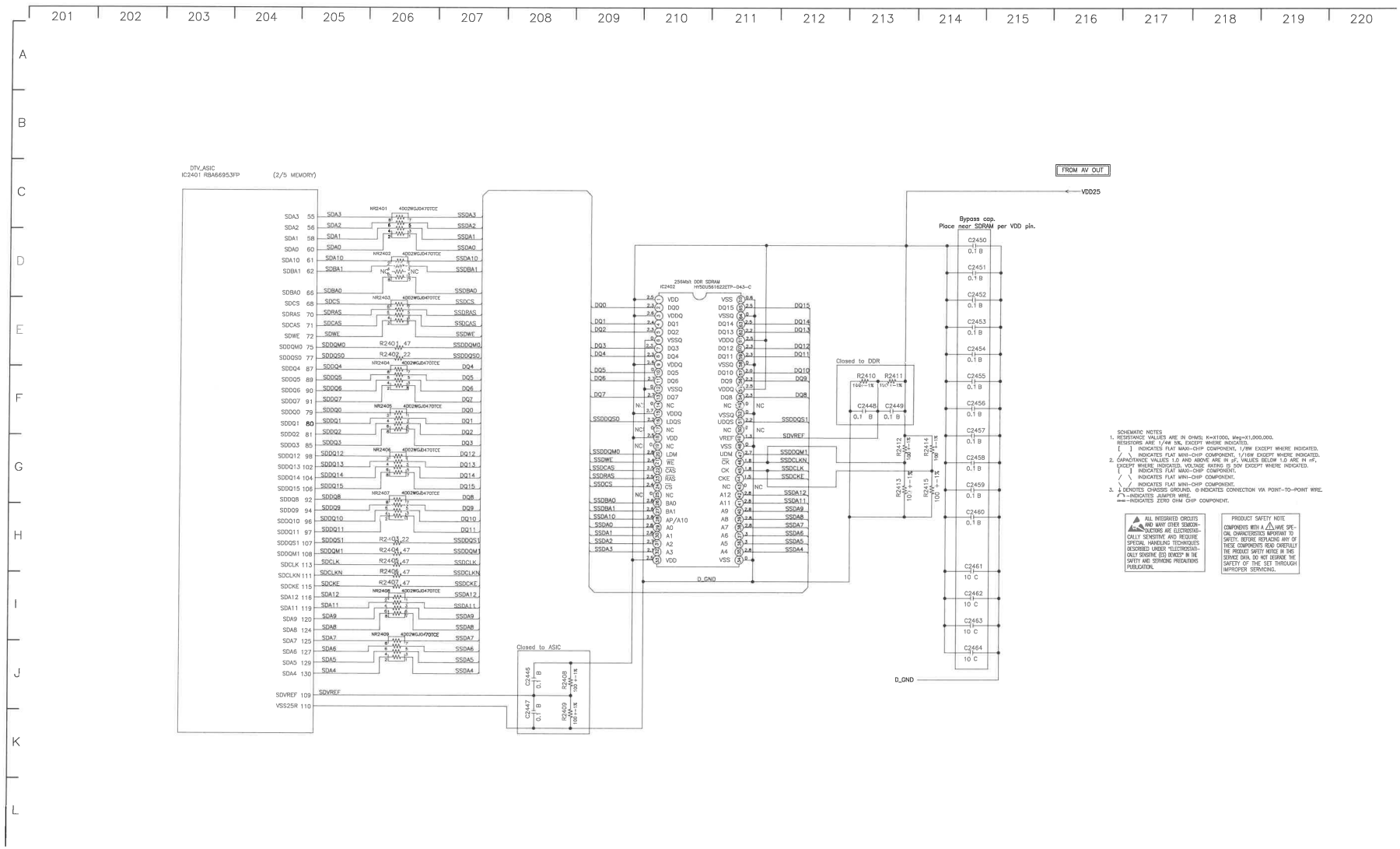
SCHEMATIC NOTES
1. RESISTANCE VALUES ARE IN OHMS; K=X1000, Meg=X1,000,000.
   RESISTORS ARE 1/4W 5%, EXCEPT WHERE INDICATED.
   [ ] INDICATES FLAT MAXI-CHIP COMPONENT, 1/8W EXCEPT WHERE INDICATED.
   / \ INDICATES FLAT MINI-CHIP COMPONENT, 1/16W EXCEPT WHERE INDICATED.
2. CAPACITANCE VALUES 1.0 AND ABOVE ARE IN µF, VALUES BELOW 1.0 ARE IN mF,
   EXCEPT WHERE INDICATED. VOLTAGE RATING IS 50V EXCEPT WHERE INDICATED.
   [ ] INDICATES FLAT MAXI-CHIP COMPONENT.
   / \ INDICATES FLAT MINI-CHIP COMPONENT.
   \ / INDICATES FLAT MINI-CHIP COMPONENT.
3. ⏚ DENOTES CHASSIS GROUND. ⊕ INDICATES CONNECTION VIA POINT-TO-POINT WIRE.
   ⌒ INDICATES JUMPER WIRE.
   ⊶ INDICATES ZERO OHM CHIP COMPONENT.

⚠ ALL INTEGRATED CIRCUITS AND MANY OTHER SEMICONDUCTORS ARE ELECTROSTATICALLY SENSITIVE AND REQUIRE SPECIAL HANDLING TECHNIQUES. DESCRIBED UNDER "ELECTROSTATICALLY SENSITIVE (ES) DEVICES" IN THE SAFETY AND SERVICING PRECAUTIONS PUBLICATION.

PRODUCT SAFETY NOTE:
COMPONENTS WITH A ⚠ HAVE SPECIAL CHARACTERISTICS IMPORTANT TO SAFETY. BEFORE REPLACING ANY OF THESE COMPONENTS READ CAREFULLY THE PRODUCT SAFETY NOTICE IN THIS SERVICE DATA. DO NOT DEGRADE THE SAFETY OF THE SET THROUGH IMPROPER SERVICING.

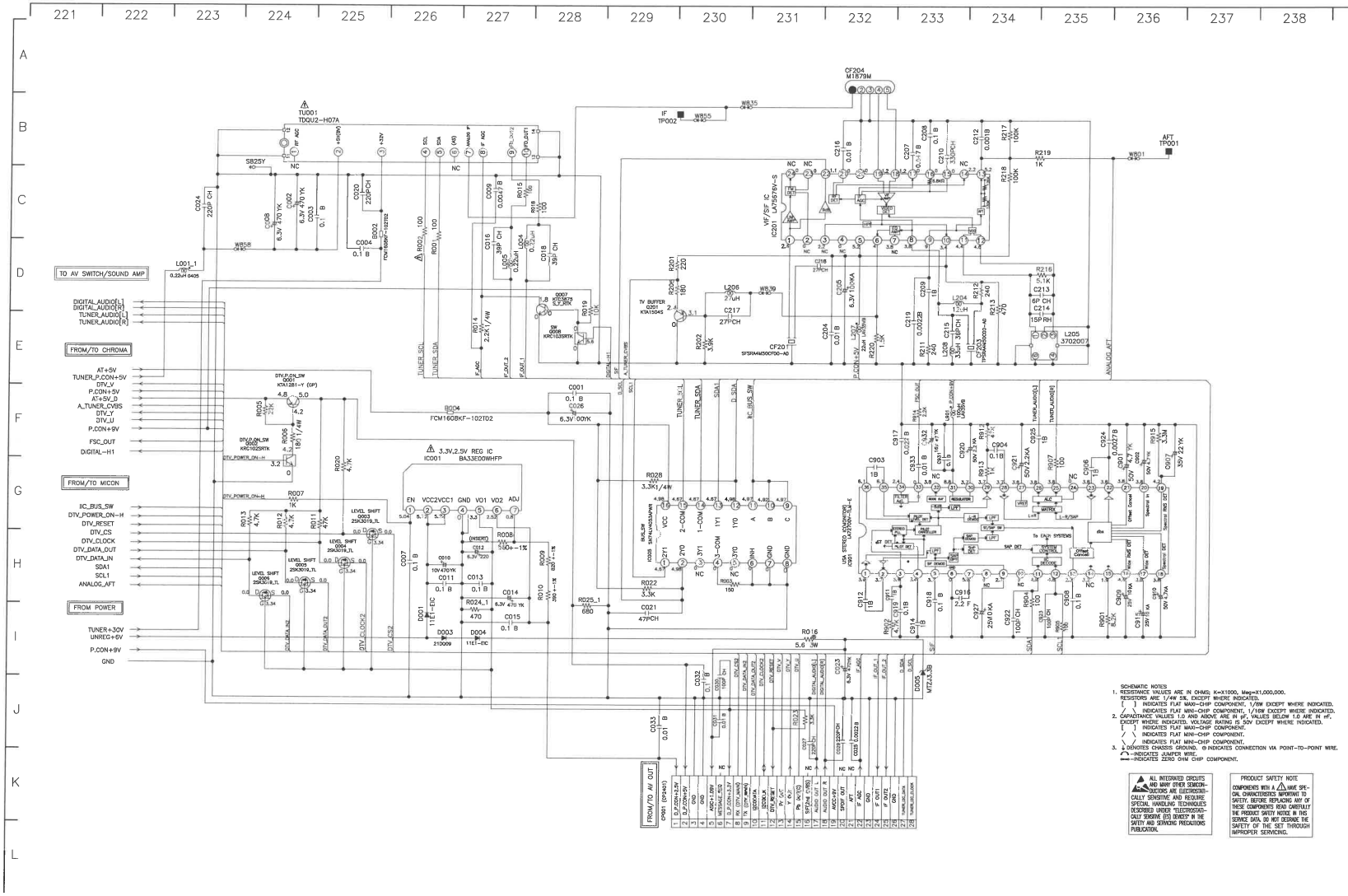
Page 9–10

SDRAM SCHEMATIC DIAGRAM



Page 9–11

TUNER/IF SCHEMATIC DIAGRAM



Page 9-12

RCA 27F554T PARTS LIST

Symbol	Stock	Description
AC CORD	275530	CORD AC BUSH P201-2469-2
B002	275500	FERRITE BEADS
B004	275500	FERRITE BEADS
B2401	275501	FERRITE BEADS
B2402	275501	FERRITE BEADS
B2403	275501	FERRITE BEADS
B2404	275500	FERRITE BEADS
B2405	275500	FERRITE BEADS
B2406	275500	FERRITE BEADS
B2410	275500	FERRITE BEADS
B2411	275500	FERRITE BEADS
B2412	275500	FERRITE BEADS
B2413	275500	FERRITE BEADS
B2414	275500	FERRITE BEADS
B2417	275499	FERRITE BEADS
B2418	275499	FERRITE BEADS
B2419	275499	FERRITE BEADS
B2420	275499	FERRITE BEADS
B2423	275501	FERRITE BEADS
B401	253344	CORE, BEADS
B402	253344	CORE, BEADS
B405	253344	CORE, BEADS
B501	265279	BEAD
B504	254882	CORE
B601	253344	CORE, BEADS
BACK	275532	BACK CABINET ASSY
BUTTON	275534	BUTTON STOPPER
C408	275428	CAP CE 2200 UF 25V
C412	275452	CAP CMPP 0.0018UF 1.5KV
C413	275423	CAP CE 1000 UF 35V
C418	262839	CAP PROP .43 UF 250V
C420	262841	CAP MCP .013 UF 1.5KV
C421	275451	CAP CPP 0.018 UF 630V
C426	275426	CAP CE 22 UF 250V
C430	275425	CAP CE 22 UF 100V
C432	275431	CAP CE 47 UF 160V
C442	275432	CAP CE 10 UF 250V
C501	275427	CAP CE 2200 UF 16V
C502	258218	CAP .001UF 2KV
C503	258218	CAP .001UF 2KV
C504	275424	CAP CE 22 UF 50V
C505	275450	CAP CMP 0.33 UF 275V EC
C506	252153	CAP POLY .22UF 250V
C507	275430	CAP CE 470 UF 200V
C508	275416	CAP CC 0.0022UF 250V
C513	264775	CAP CC .001 UF 250V
C514	275429	CAP CE 680 UF 16V
C517	264730	CAPCC .0027UF 2KV

C519	264775	CAP CC .001 UF 250V
C520	254727	CAPCC .001UF 500V
C521	275433	CAP CE 220 UF 160V
C527	275422	CAP CE 2200 UF 16V
C535	258218	CAP .001UF 2KV
C802	262844	CAP CER .001 UF 2KV
CABLE	275484	CABLE WM2468 AWG26 420MM
CABLE	275485	CABLE WM2468 AWG26 540MM
CF201	275526	FILTER,CER SFSRA4M50CF00-
CF203	275525	FILTER,CER TRAP TPSRA4M50
CF204	275527	FILTER,SAW 1879M
CIRCUIT	275413	DIGITAL PCB ASSY CEF284B
CIRCUIT	275414	TV MT PCB ASSY CMG117B
CIRCUIT	275415	CRT PCB ASSY CCG080B
CP1001	265287	CONNECTOR,4-PIN
CP101	275518	CONNECTOR A2001WR2-8P
CP2401	275517	CONNECTOR A2003WR2-1FX28P
CP2402	275516	CONNECTOR A2001WR2-11P
CP502	255951	CONNECTOR
CP804	265281	CONNECTOR,3-PIN
D001	252176	DIODE IIE 1-EIC
D003	275419	DIODE 21DQ09
D004	252176	DIODE IIE 1-EIC
D005	275421	DIODE,MTZJ3.3B T-77
D104	252023	DIODE 1SS133T-77
D105	253310	DIODE SB140-EIC
D2401	254820	DIODE SILICON 1SS355 TE17
D401	252176	DIODE IIE 1-EIC
D402	252176	DIODE IIE 1-EIC
D403	253872	DIODE,ZENER MTZJ33B T-77
D404	252027	DIODE, ZENER MTZJ5 6BT77
D405	275417	DIODE,1N4937-F
D406	252027	DIODE, ZENER MTZJ5 6BT77
D407	275417	DIODE,1N4937-F
D408	262911	DIODE,SILICON RS-4FS
D409	275420	DIODE 30PRA60-FC
D410	253872	DIODE,ZENER MTZJ33B T-77
D411	275417	DIODE,1N4937-F
D412	253309	DIODE SILICON 1N4005-EIC
D414	252176	DIODE IIE 1-EIC
D415	252176	DIODE IIE 1-EIC
D416	252176	DIODE IIE 1-EIC
D501	252179	DIODE RE11C-EIC
D502	252179	DIODE RE11C-EIC
D503	252179	DIODE RE11C-EIC
D504	252179	DIODE RE11C-EIC
D505	275418	DIODE SR290
D506	275417	DIODE,1N4937-F
D507	252023	DIODE 1SS133T-77
D508	264746	DIODE,ZENER MTZJ3.9B T-77
D509	263308	DIODE,ZENER MTZJ15B T-77
D510	275420	DIODE 30PRA60-FC

D511	275417	DIODE,1N4937-F
D512	275418	DIODE SR290
D513	252023	DIODE 1SS133T-77
D514	252023	DIODE 1SS133T-77
D515	252023	DIODE 1SS133T-77
D516	252023	DIODE 1SS133T-77
D517	275417	DIODE,1N4937-F
D523	259064	DIODE ZENER MTZJ18B T-77
D524	252023	DIODE 1SS133T-77
D525	252027	DIODE, ZENER MTZJ5 6BT77
D528	252027	DIODE, ZENER MTZJ5 6BT77
D529	275418	DIODE SR290
D530	252178	DIODE, ZENER MTZJ10B T77
D531	253872	DIODE,ZENER MTZJ33B T-77
D532	254819	DIODE,ZENER MTZJ11B T-77
D533	252023	DIODE 1SS133T-77
D535	262856	DIODE,ZENER MTZJ4.7B T-77
D536	252023	DIODE 1SS133T-77
D539	252023	DIODE 1SS133T-77
D611	252023	DIODE 1SS133T-77
D612	252023	DIODE 1SS133T-77
D801	252023	DIODE 1SS133T-77
D802	252023	DIODE 1SS133T-77
D803	252023	DIODE 1SS133T-77
D810	252023	DIODE 1SS133T-77
D811	252023	DIODE 1SS133T-77
D812	252023	DIODE 1SS133T-77
F501	262903	FUSE
FB401	275505	TRANSFORMER,FJN27W004M
FH501	265298	CLIP,FUSE
FH502	265298	CLIP,FUSE
FRAME	275533	BUTTON FRAME
IC001	275445	IC BA33E00WHFP-TR
IC005	275435	IC SN74LV4053APWR
IC1001	275436	IC AN17822A
IC101	275448	IC OEC7180B
IC102	275449	IC PST3245NR
IC199	275545	EEPROM LG VERSION
IC199	275546	IC AT24C08AN-10SU-2.7
IC201	275440	IC LA75676V-S
IC2401	275447	IC R8A66953FP
IC2402	275434	IC HY5DU561622ETP-D43-C
IC2403	275470	IC K8D3216UTC-PI07
IC2405	275446	IC CS4348-CZZR
IC2406	275439	IC NJM4580V(TE1)
IC2408	275444	IC BA00HC5WF-E2
IC401	275443	IC LA7847-E
IC504	267719	IC
IC601	275441	IC LA76327M-B-MPB-E
IC602	275437	IC NJM2283M(TE1)
IC701	275438	IC NJM2750M(TE1)
IC901	275442	IC LA72700V-TLM-E

J701	269303	RCA JACK MSP-213V2-432
J702	275514	JACK S4-25SZ
J703	275510	JACK MSP-382V-12_NI_FE_LF
J704	275509	JACK MSP-213V1-652_NI_LF
J705	275511	JACK AV-5A-66H
J706	275513	JACK AV-5A-68H
J707	275512	JACK AV-5A-67H
J801	275515	SOCKET,CRT ISHD62S
L001	275496	COIL 0.22 UH
L004	255924	COIL .22UH
L005	255924	COIL .22UH
L101	252221	COIL 2.2UH
L204	275489	COIL 12 UH
L205	275504	COIL 3702007
L206	275491	COIL 27 UH
L207	275495	COIL 22 UH
L208	275492	COIL 33 UH
L2401	275488	COIL 0.22 UH
L402	275498	COIL,LINEARITY 311015026
L403	275487	COIL CHOKE 02DK00005
L501	275503	COIL,LINE FILTER 2R0A902F
L503	275502	COIL,DEGAUSS T028R27023
L601	275490	COIL 22 UH
L603	275494	COIL 15 UH
L801	275497	COIL 150 UH
L901	275493	COIL 100 UH
MASK	275531	FRONT CABINET ASSY
NR2401	275529	RES.NWK 4D02WGJ0470TCE
NR2402	275529	RES.NWK 4D02WGJ0470TCE
NR2403	275529	RES.NWK 4D02WGJ0470TCE
NR2404	275529	RES.NWK 4D02WGJ0470TCE
NR2405	275529	RES.NWK 4D02WGJ0470TCE
NR2406	275529	RES.NWK 4D02WGJ0470TCE
NR2407	275529	RES.NWK 4D02WGJ0470TCE
NR2408	275529	RES.NWK 4D02WGJ0470TCE
NR2409	275529	RES.NWK 4D02WGJ0470TCE
NR2410	275528	RES.NWK 4D02WGJ0220TCE
NR2411	275528	RES.NWK 4D02WGJ0220TCE
NR2412	275528	RES.NWK 4D02WGJ0220TCE
NR2413	275528	RES.NWK 4D02WGJ0220TCE
NR2414	275528	RES.NWK 4D02WGJ0220TCE
NR2415	275528	RES.NWK 4D02WGJ0220TCE
NR2416	275528	RES.NWK 4D02WGJ0220TCE
NR2417	275528	RES.NWK 4D02WGJ0220TCE
NR2418	275528	RES.NWK 4D02WGJ0220TCE
NR2420	275528	RES.NWK 4D02WGJ0220TCE
Q001	275477	TRANS KTA1281-Y(GP)
Q002	253323	TANSISTOR KRC102RKD
Q003	275483	TRANS 2SK3019_TL
Q004	275483	TRANS 2SK3019_TL
Q005	275483	TRANS 2SK3019_TL
Q006	275483	TRANS 2SK3019_TL

Q007	262881	TRANSISTOR KTC3875S Y RTK
Q008	253325	TRANSISTOR KRC103RTK
Q1001	262881	TRANSISTOR KTC3875S Y RTK
Q106	262882	TRANSISTOR KTA1504S Y RTK
Q107	253329	TRANSISTOR RTKA103
Q201	262882	TRANSISTOR KTA1504S Y RTK
Q2401	275482	TRANS KTK5132E-RTK/P
Q2402	275482	TRANS KTK5132E-RTK/P
Q402	262880	TRANSISTOR KTC3227 Y-A1
Q405	275475	TRANS 2SD2711 (LB0EC1)
Q501	275471	TRANS KTC3203-Y-BRK(GP)
Q502	275476	TRANS STF10NK50Z
Q503	275479	TRANS 2SA1371-E (GP)
Q504	275473	TRANS KTC3198-AT-GR-BRK(
Q505	275481	TRANS 2SC2909-R (GP)
Q506	264826	KRC104SRTK
Q507	275473	TRANS KTC3198-AT-GR-BRK(
Q508	253322	TRANSISTOR KTA 1271 Y-AT
Q509	275473	TRANS KTC3198-AT-GR-BRK(
Q510	264826	KRC104SRTK
Q514	275471	TRANS KTC3203-Y-BRK(GP)
Q601	253323	TANSISTOR KRC102RKD
Q602	275480	TRANS KTC3209-Y(GP)
Q603	253330	TRANSISTOR KTA1266-AT
Q605	259074	TRANSISTOR KRA102SRTK
Q607	275480	TRANS KTC3209-Y(GP)
Q608	275474	TRANS KTD1691Y
Q609	275474	TRANS KTD1691Y
Q610	262881	TRANSISTOR KTC3875S Y RTK
Q611	275480	TRANS KTC3209-Y(GP)
Q612	262881	TRANSISTOR KTC3875S Y RTK
Q701	262881	TRANSISTOR KTC3875S Y RTK
Q704	262881	TRANSISTOR KTC3875S Y RTK
Q801	262921	KTC3199 Y-AT
Q802	262921	KTC3199 Y-AT
Q803	262921	KTC3199 Y-AT
Q804	275472	TRANS KTC4217-Y-BRK(GP)
Q805	275472	TRANS KTC4217-Y-BRK(GP)
Q806	275472	TRANS KTC4217-Y-BRK(GP)
R002	256323	RES RC 100 OHM 1/10W
R016	275461	RES.M.O 5.6 OHM 3W
R408	262825	RES, FUSE 1 OHM 1/2W
R410	275460	RES.M O 68 OHM 2W
R411	275466	RES.FUSE 5.6 OHM 2W
R416	275453	RES.3.3 OHM 1/2W
R420	275453	RES.3.3 OHM 1/2W
R421	275458	RES.M O 180 OHM 2W
R426	256308	RES MF 4.7K OHM 1/6W
R434	275464	RES.CEM 8.2 OHM 10W
R438	275467	RES.FUSE 3.3 OHM 1W
R439	275454	RES.M.O 1K OHM 1W
R441	275462	RES.MET 33K OHM 1/6W

R452	275457	RES.M O 100 OHM 2W
R459	275469	RES.FUSE 2.2 OHM 1/2W
R500	254797	RES CF 2.7M OHM 2W
R501	275463	RES.CEM 1 OHM 7W
R502	275455	RES.M O 330 OHM 2W
R506	256058	RES CR 6.8K OHM 1/4
R520	262832	RES CF 1.5M OHM 1/2W
R522	275468	RES.FUSE 15 OHM 1/2W
R541	275465	RES.FUSE 0.22 OHM 1W
R542	252127	RES MET OIXDE .22 OHM 1W
R603	275459	RES.M O 56 OHM 2W
R650	275456	RES.M O 15 OHM 3W
R803	254802	RES MF 15K OHM 2W
R805	254802	RES MF 15K OHM 2W
R807	254802	RES MF 15K OHM 2W
REMOTE	275521	REMOTE RECEIVER ROM-S056S
RY501	275508	RELAY ALKS321_M60
SP1001	275519	SPEAKER S0510F06
SP1002	275519	SPEAKER S0510F06
SW101	253906	SWITCH,TACT
SW102	253906	SWITCH,TACT
SW103	253906	SWITCH,TACT
SW104	253906	SWITCH,TACT
SW105	253906	SWITCH,TACT
T401	275506	TRANS.HOR DR VRKE19-171-W
T501	275507	TRANSF.SW 81350974
TH501	254900	DEGAUSS ELEMENT
TM101	275520	REMOTE TRANSMITTER
TU001	275486	DIGITAL TUNER TDQU2-H07A
VR401	262931	RES VOLUME,SEMI FIXED
VR502	DISCON_S	RES VOLUME,SEMI FIXED
X101	275524	CRYSTAL B12000E011
X102	252260	CRYSTAL 32.768KHZ
X2401	275523	CRYSTAL B25000E023
X601	275522	CRYSTAL HC-49/U